

The Relationship Between The Length of Time Undergoing Hemodialysis and The Fulfillment of Sexual Needs in Male Patients with Chronic Kidney Failure in The Malahayati Hemodialysis Room of dr. Saiful Anwar Hospital, Malang

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ABSTRACT

Male patients undergoing prolonged hemodialysis can experience a decrease in reproductive system function, leading to sexual dysfunction. The aim of the research was to determine the relationship between the length of time undergoing hemodialysis and the fulfillment of sexual needs in chronic kidney failure patients in the Malahayati Room of dr. Saiful Anwar Hospital, Malang. The research design uses non-experimental correlational research with a cross-sectional approach. The population of this study were all male chronic kidney failure sufferers who underwent hemodialysis in the Malahayati Hemodialysis Room of dr. Saiful Anwar Hospital, Malang. As of June 2023, there were 71 people. The samples in this study were all male CKD patients of productive age (15–64) taken using the purposeful sampling method. Data collection uses a questionnaire. The results of the study showed that almost half of the respondents with CKD underwent hemodialysis in the Malahayati Room of dr. Saiful Anwar Hospital, Malang for > 24 months, namely 41.80%, and as many as 50.90% of respondents who underwent hemodialysis had their sexual needs still fulfilled. The results of Chi Square test showed there was a relationship between the length of time undergoing hemodialysis and the fulfillment of sexual needs in male CKD patients in the Malahayati Room of dr. Saiful Anwar Hospital, Malang (p value 0,00). It is hoped that hospitals can provide services that support the understanding of CKD sufferers, such as providing appropriate health education to patients so that they understand the changes that will occur in their health.

Introduction (Cambria Bold 12 pt)

Decreased sexual function can influence changes in sexual patterns which in the end can have an impact on the satisfaction of sexual needs. Fulfillment of sexual needs in normal people is also experienced by abnormal people (suffering from illness/treatment therapy), namely those suffering from Chronic Kidney Failure (CKD) (Abrori, 2017).

Nur Rasyid's research (2020) shows that 15-20% of couples worldwide suffer from infertility disorders, where the number of sexual problems in men reaches 31%. Sexual dysfunction in men is a complex problem because the causes can vary. Based on a survey in Europe, 52% of men experienced sexual decline, but only 50% of men knew the signs of decreased sexual function. In Indonesia, the prevalence of decreased sexual function in the population 20-80 years is quite high, namely 35.6%.

Sex life is not only intended to carry out reproductive functions as humans but also to support basic psychological needs for satisfaction, happiness, comfort, and the formation of new energy, according to Patricia, (2019). The pattern of men's sexual life is very different from the pattern of women's sexual life because it is the man who initiates sexual relations. And tend to



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fantasize about sex more often have sexual desires and tend to use physical force to force someone to engage in sexual activities (Jeffrey, Nevid Coshim, and Rizal, 2021). Men do not experience a decline in sexual relations until a certain age. Problems that arise due to abnormal sexual function can have an impact on changing the pattern or quality of life and prosperity of the family. Lumban Donnie (2022). The problem of decreased erectile function or impotence is the inability of a person to be able to or maintain erectile function during sexual activity to climax. This limitation shows that the stage of the male sexual function process has two components, namely achieving an erection and being able to maintain it. Causes that can inhibit sexual ability or change sexual habits in men include chronic diseases, medications related to sexual function, and degeneration of entire organs. (Nurbiah, 2021).

Siregar (2020) believes that CKD has an impact on the male reproductive system, where male patients undergoing prolonged hemodialysis can affect the function of the genitals so that it can result in orgasm disorders and changes in sexual function. Interventions that can be given to patients with chronic kidney failure are hemodialysis/dialysis. Hemodialysis is a method of therapy that replaces the kidneys using a semipermeable membrane that can function like nephrons that do not function sexually. The prevalence of CKD with hemodialysis with severe erectile dysfunction was 29.85% and without hemodialysis, 45.09% and 11.94% of chronic renal failure sufferers with hemodialysis who did not experience erectile dysfunction were 11.94% and without hemodialysis 7.84% (Sihaloho, 2006, so that it can remove metabolic waste and correct fluid and electrolyte balance disorders in the kidneys. Patients with kidney failure require each patient to follow therapy according to a regular treatment schedule while waiting for the next treatment program (Nuari, 2017).

In Indonesia, the number of patients according to PERNEFRI (Indonesian Kidney Association) data in 2018, there are around 70,000 patients suffering from kidney disease, who are known to have end-stage chronic kidney disease, and 4,000-5,000 people are treated with hemodialysis. In 2016, according to the results of a survey conducted by PERNEFRI, there were 30.7 million sufferers of chronic kidney failure (CKD) based on data from PT. If implemented, the number is around 14.3 million people who suffer from end-stage kidney disease and are undergoing dialysis treatment. In 2015, BPJS funded health services for the treatment of kidney disease amounting to 2.78 trillion rupiah, for both outpatient and inpatient patients, and the amount increased from 2014 to 2.2 trillion rupiah (Riskedas, 2016).

The highest prevalence of CKD occurred in three provinces, namely West Java with 7,444 new patients, East Java with 4,828 new patients, and the third highest position in DKI, namely 2,973 new patients. Meanwhile, during preliminary data collection in the Hemodialysis room at dr. Saiful Anwar Hospital, Malang. Shows that there are 123 CKD patients every month who undergo hemodialysis. Consisting of 71 male patients, the rest were female (Medical Records of dr. Saiful Anwar Hospital, Malang, 2022).

Sri Haryani and Misniarti's research in 2016 found that the majority of informants experienced sexual problems, including feeling weak during sex, feeling tired quickly, not feeling hot enough during sex, and not wanting to walk for a long time during sex. The physical problem that hemodialysis patients often complain about is gender change. Hemodialysis patients have difficulty having sex with their partners. These changes are a manifestation of erectile dysfunction, ejaculation in men, decreased sexual desire, and desire disorders that are common in men.

Based on a preliminary study by researchers in March 2023 in the Malahayati Hemodialysis Room of dr. Saiful Anwar Hospital Malang Obtained from the results of a questionnaire conducted on 5 patients undergoing hemodialysis, in the Malahayati Hemodialysis Room. There were 2 patients whose sexual needs had not been fulfilled who had undergone hemodialysis for more

than 2 years, 1 patient who had had their sexual needs fulfilled who had been undergoing hemodialysis for 1.5 years, and 2 patients who had had their sexual needs fulfilled who had undergone hemodialysis for 5 months. Therefore, this study aims to find out whether the length of time undergoing hemodialysis is related to fulfilling sexual needs in men.

Methods

Research design

The research design used is a non-experimental correlational research design (relationship/association) which uses a cross-sectional approach where data relating to the independent variable and the dependent variable will be collected at the same time.

In this study, the population was male Chronic Kidney Failure patients undergoing hemodialysis in the Malahayati Room of dr. Saiful Anwar Hospital, Malang numbered 71 respondents in July 2023. The IIEF questionnaire has been tested for validity and reliability several times, one of which was carried out by (Betsyeba Irene Augustina, 2018) who stated that the IIEF instrument had been translated into the Indonesian version through 4 stages and Pudjibudoyo (2021) stated that sexual needs can be measured using a validated questionnaire, namely the International Indexes For Erectile Function (IIEF). Pudjibudoyo (2021) menyatakan bahwa IIEF pertanyaannya sudah tervalidasi dan reabilitasnya sudah terbukti dengan sensitivitas 0,98 dan spesifitas 0,88.

This research design is a non-experimental correlation research design where data on the dependent and independent variables is collected at the same time. So that the determination of sample size can be formulated as follows:

$$\begin{aligned}n &= \frac{n}{N \cdot d^2 + 1} \\n &= \frac{71}{71 \cdot (0.05)^2 + 1} \\n &= \frac{71}{0,177 + 1}\end{aligned}$$

$$n = 60$$

Thus, the sample obtained in this study was 60 male CKD patients undergoing hemodialysis therapy. However, 5 patients were taken for the preliminary study so the total sample was 55 patients.

Inclusion and Exclusion Criteria

The following are the inclusion criteria and exclusion criteria established in this study

- Chronic kidney failure sufferer undergoing hemodialysis in the Malahayati room of dr. Saiful Anwar Hospital, Malang.
- Adults aged 15 to 65 years
- Undergo hemodialysis regularly 2x a week
- Married and still have a living partner
- Willing to be a respondent
- Patients can communicate well
- Chronic kidney failure patients who experience communication disorders such as: mute, deaf
- The patient does not yet have a routine schedule



- i. The patient experiences impaired consciousness
- j. The patient cannot read and write
- k. Consuming tonic

By using purposive sampling techniques, the sample can represent previously known characteristics of the population. This research was conducted in July in the Malahayati Room of dr. Saiful Anwar Hospital Malang.

The data collection instrument used in this research was a questionnaire. The IIEF questionnaire is to measure the fulfillment of sexual needs in men. This questionnaire consists of 15 questions, each question is given a value of 0-5. according to Mulyadi Kuswardani (2019). If the score is ≥ 39 then sexual needs are fulfilled and if the score is < 39 it means sexual needs are not fulfilled. To test the relationship between the two variables studied, namely the independent and dependent variables in this study. In this study, the chi square correlation test was used, because the data was ordinal. The decision criteria are based on the p-value, if the $p\text{-value} > \alpha = 0.05$ then it is concluded that there is no significant correlation between the two variables, and if the $p\text{-value} < \alpha = 0.05$ then it is concluded that there is a significant correlation between the two variables.

Results and Data Analysis

The research results are presented in three parts, namely a general description of the research site, general data, and special data. General data will be presented on the characteristics of respondents including age, BMI category, occupation, final education, exercise habits, frequency of exercise and type of exercise. Special data contains the length of time undergoing hemodialysis to fulfill the sexual needs of CKD patients in the Malahayati Room of dr. Saiful Anwar Hospital, Malang.

The characteristics of the respondents in the research were collected to determine the description of the respondents who were used as research subjects.

Table 1 Characteristics of Respondents Based on Age

Respondent Characteristics	Frequency	Percentage
Age		
15-25 years old	3	5.50
26-45 years old	29	52.70
46-64 years old	23	41.80
BMI		
Low	3	5.50
Normal	35	63.60
Excessive	15	27.30
Obesity	2	3.60
Occupation		
Working	31	56.40
Not-working	24	43.60
Last Education		
Primary School	6	10.90
Junior High School	17	30.90
Senior High School	28	50.90
Bachelor	4	7.30

Exercise Habits		
Yes	32	58.20
No	23	41.80
Exercise Frequency		
once/week	12	37.50
twice/ week	19	59.38
>2 times/week	1	3.13
Exercise type		
Around the house	7	21.88
Outside the house	16	50.0
Etc	9	28.13

Based on the data in table 1, most of the respondents were aged between 26-45 years. The characteristics of respondents based on BMI were mostly normal (63.60), based on job characteristics, most were still working (56.40), based on the latest education data obtained, the majority had high school education (50.90%). Based on the characteristics of sports habits, most of them like sports (58.20).

Specific Data on Respondent Characteristics Based on the Length of Time Patients Undergo Hemodialysis in the Malahayati Room of dr. Saiful Anwar Hospital, Malang

Table 2 The Length of Time Chronic Kidney Failure Patients Undergo Hemodialysis in The Malahayati Room of dr. Saiful Anwar Hospital, Malang

Criteria	Frequency	Percentage
≤ 12 months	15	27.3
12-24 months	17	30.9
> 24 months	23	41.8

Based on Table 2, it can be seen that almost half of the respondents were CKD patients who underwent hemodialysis in the Malahayati Room of dr. Saiful Anwar Hospital, Malang for > 24 months, namely 41.8%.

Characteristics of Respondents Based on Fulfillment of Sexual Needs in Men with Chronic Kidney Failure in the Malahayati Room of dr. Saiful Anwar Hospital, Malang

Table 3 Fulfillment of Sexual Needs in Male Patients with Chronic Kidney Failure in The Malahayati Room of dr. Saiful Anwar Hospital, Malang

Criteria	Frequency	Percentage
Fulfilled	28	50.90
Unfulfilled	27	49.10

Based on table 3, it shows that the majority of male CKD patient respondents undergoing hemodialysis in the Malahayati Room of dr. Saiful Anwar Hospital, Malang, show that their sexual needs was fulfilled (50.90%).

Analysis of the Relationship Between the Length of Hemodialysis and the Fulfillment of Sexual Needs in Male CKD Patients in the Malahayati Room of dr. Saiful Anwar Hospital, Malang

Table 4 Cross Tabulation Between The Length of Undergoing Hemodialysis and The Fulfillment of Sexual Needs

Long time undergoing hemodialysis	Sexual Needs		Total n(%)
	Fulfilled n (%)	Un-fulfilled n (%)	
≤ 12 months	14 (93.30)	1 (6.70)	15 (100.00)
12-24 months	9 (93.30)	8 (6.70)	17 (100.00)
> 24 months	5 (21.70)	18 (78.30)	23 (100.00)
Total	28 (50.90)	27 (49.1)	55 (100)

Table 4 shows that almost all respondents, namely 14 respondents (93.30%) out of 15 respondents who underwent hemodialysis ≤ 12 months, told their sexual needs was fulfilled. As many as 9 out of 17 patients who underwent hemodialysis for 12-24 months told that their sexual needs was fulfilled. Meanwhile, in patients undergoing hemodialysis >24 months, told that their sexual needs were not fulfilled, which were 78%. Cross tabulation results show that the longer patients undergo hemodialysis, the more CKD patients there are in the Malahayati Room of dr. Saiful Anwar Hospital, Malang whose sexual needs are not met (unfulfilled).

Table 5 Chi Square Test Between The Length of Undergoing Hemodialysis and The Fulfillment of Sexual Needs

Chi-Square Tests			
	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	18.661 ^a	2	.000
Likelihood Ratio	21.287	2	.000
Linear-by-Linear Association	18.226	1	.000
N of Valid Cases	55		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.36.

Table 5 shows the results of the chi square test showing that there is a relationship between the length of time undergoing hemodialysis and the fulfillment of sexual needs in male CKD patients in the Malahayati Room of dr. Saiful Anwar Hospital, Malang with a p value of 0.00 so the value is smaller than what was set (p value <0.05).

Discussion



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The results of the research that has been carried out will be discussed in this chapter, namely regarding the relationship between length of living. hemodialysis to fulfill the sexual needs of CKD patients in the Malahayati Room of dr. Saiful Anwar Hospital, Malang. In this study, 55 respondents from CKD patients were used in the Malahayati Room, Anwar Hospital, Malang, using inclusion and exclusion criteria. Conducted in July 2023. The characteristics of respondents in this study include age, BMI, occupation, highest level of education, and exercise habits.

Identification of the Length of Time Patients Undergo Hemodialysis in Room Malahayati 1 of dr. Saiful Anwar Hospital, Malang

The results showed that almost half, namely 41.8% of respondents (23 people) had undergone hemodialysis for > 24 months, and 48.20 had undergone hemodialysis > 12 months with details of 17 people undergoing hemodialysis for 12-24 months and a further 15 people undergoing hemodialysis for ≤ 12 months. These results are in line with research by Ardiyani (2019) which states that most of the CKD patients who underwent hemodialysis therapy were in the old category or ≤ 12 months as many as 29 (60.4%) while there were 19 (39.6%) new patients who underwent hemodialysis therapy or > 24 months.).

The results of the research obtained are the same as the results of research conducted by Bellasari, (2020) that the majority of HD patients in Madiun City Hospital did HD for 12-24 months, namely 33 patients (43%), who did HD <12 months as many as 29 patients (38%), who were >24 months (15%). The duration of hemodialysis therapy is defined as how long a person has been undergoing hemodialysis therapy. The aim of hemodialysis therapy is not to cure patients from CKD, because this disease is irreversible, but to replace kidney function and maintain homeostasis of the human body. The duration of hemodialysis therapy is divided into 2, namely, long if > 12 months and new < 11 months.

Hemodialysis is a high technology that is used to replace kidney function and metabolic waste or toxins in human blood circulation, for example water, sodium, potassium, hydrogen, urea, creatinine, uric acid, or other substances can be removed through a semi-permeable membrane for separation. blood and fluid are dialyzed in an artificial kidney during the processes of diffusion, osmosis and ultrafiltration. Dialysis can be used for long-term treatment for CKD or for temporary treatment before the patient undergoes a kidney transplant Bellasari, (2020). Replacing kidney function so that the human body's homeostasis can be maintained is the goal of hemodialysis. Hemodialysis therapy for a long time will result in the emergence of several complications and can result in physiological stressors for the patient.

The duration of hemodialysis for Chronic Kidney Failure (CKD) patients is not influenced by age. There is no significant relationship between age and duration of hemodialysis (Syaiful et al., 2018). The study also stated that there was no relationship between the duration of hemodialysis and nutrition in CKD sufferers undergoing hemodialysis. Based on research conducted on all respondents, it was found that more respondents had normal nutritional status.

According to the researchers, the duration of a patient's hemodialysis is influenced by the first time the respondent is told they have to undergo hemodialysis, because CKD patients with dialysis therapy will undergo hemodialysis throughout their life and this is done for 3-4 hours per therapy, 2-3 times a week.

Identification of Fulfillment of Sexual Needs in Patients Failing to CKD in the Malahayati Room of dr. Saiful Hospital Malang

The research results showed that 50.90% (28 people) of respondents who underwent hemodialysis told that their sexual needs was fulfilled and the remaining 49.10% of respondents (27 people) who underwent hemodialysis told that their sexual needs was not fulfilled. The



results of this study are in line with Purnamasari, (2020) that the highest number of sexual needs in the patient group were not fulfilled, 27 people (57.7%) and the least were 22 people (42.3%) whose sexual needs were fulfilled.

According to Ardiyani (2019), the attitude of CKD patients who undergo hemodialysis therapy regarding their sexual experience is very different from the attitude of people who do not have chronic disease. Sexuality is a basic human need that must be fulfilled. Sexuality can be interpreted as the most basic and most important part of life, and has various factors, including how people feel about themselves, how they communicate with other people and how they want to be able to build relationships. Sexuality is also about pleasurable sexual activities, which can involve intimate relationships or not, for example touching, hugging, kissing and mutual love, affection (Noviati et al., 2019).

The patient's sexual activity is identified as the patient's willingness to have sexual relations. Reduced sexual activity in CKD patients is due to a lack of sexual function which results in changes in sexual patterns. As a result of changes in sexual patterns, clients will refrain from having sexual relations, because they are doubtful about their sexual abilities. Apart from that, it can be emotional emptiness and have a negative sexual nature, because sexual relations are said to be healthy if the desired sexual relations can be enjoyed together and nothing bad happens, whether physical or psychological (Haryani, 2018). The results of Haryani's research also showed that all informants experienced changes and decreased sexual activity. The changes experienced include feeling weak quickly and not being able to last long during sexual activity, reduced enthusiasm, there is a decrease in interest in engaging in sexual activity. CKD patients undergoing hemodialysis experience a decrease in their desire to have sexual relations.

Participants may change in sexual relations after undergoing hemodialysis. Changes in how you have sexual intercourse after hemodialysis include the amount, duration and desire to have sexual intercourse. A factor that can have an impact on sexuality is the habit of living a healthy life and health conditions. The process of patient adaptation to the disease they are experiencing and the therapy carried out can provide a person with a much better quality of life. In this regard, all respondents with a hemodialysis duration of <1 year thought that they had reached the acceptance stage and were accustomed to undergoing the hemodialysis process with daily activities both with family and work relatives (Kuway et al., 2021).

According to researchers, the fulfillment of sexual activity in CKD patients. In the Malahayati Room of dr. Saiful Anwar Hospital, Malang is also influenced by exercise, based on research results, the patient has been on hemodialysis for <12 months but his sexual needs are fulfilled because he is diligent in exercising. This is proven because exercise can increase stamina. Other research has found that there are differences in sexual performance and testosterone levels between people who frequently do physical activity or exercise and people who do not exercise. Apart from that, age can also influence the reproductive process as well as the sexual process, including the frequency of sexual intercourse. Usually, as you get older, the frequency of sexual intercourse becomes less frequent.

Analysis of the Relationship Between the Length of Hemodialysis and the Fulfillment of Sexual Needs in CKD Patients in the Malahayati Room of dr. Saiful Anwar Hospital, Malang

The results of the research show that in cross tabulation the longer you undergo hemodialysis, the more patients you have. CKD in the Malahayati Room of dr. Saiful Anwar Hospital, Malang whose sexual needs are not fulfilled. The results of the chi square test show that there is a relationship between the length of time undergoing hemodialysis and the fulfillment of sexual needs in CKD patients in the Malahayati Room of of dr. Saiful Anwar Hospital, Malang (p value <0.05). Temporary allegations of a relationship between the length of time undergoing



hemodialysis and the fulfillment of sexual needs in CKD patients in the Malahayati Room of dr. Saiful Anwar Hospital, Malang, is influenced by the quality of life of CKD patients. This is in line with research of Bellasari, (2020), that there is a relationship between the length of time undergoing HD and the quality of life of HD patients at Regional Hospital of Madiun.

Sexuality is a comprehensive element in the form of love, in which there is love that does not lead to love in marriage or sexual intimacy. Gender can provide different tones of warmth and encouragement in various relationships. Sexuality in a marriage can be interpreted as a complete statement of the sexual union between husband and wife. Erectile dysfunction is caused by disorders of the endocrine system (which produces the testosterone hormone) to stimulate the desire for sexuality (libido), so that blood supply cannot be sufficient to the penis which is connected directly to the kidneys. Apart from that, it can be caused by psychological and emotional factors. CKD patients experience emotional changes (depression) which can drain energy (Noviati et al., 2019).

According to Ardiyani (2019), CKD patients undergoing hemodialysis have the hope that sexual intercourse will end in sexual satisfaction, even though the client's sexual relations are as they were before the illness. There are also many people who engage in intimacy not only for sexual satisfaction, but also for mutual attention and affection, which is also more aimed at making their partner happy, rather than aiming at their own interests.

Sexual problems will still be a challenge for men with CKD, whether medically or psychologically. Psychosocial and sexual problems, as well as feelings of unattractiveness both physically and emotionally, from extensive reports by participants, suggest that the personal consequences that can be detrimental are also distressing (Purnamasari, 2020).

According to researchers, communication and partner support can influence sexual activity, because communication and support are the first step in dealing with sexual problems, because sexual problems are not only problems with clients but also problems with partners. Barriers that can arise in communication between husband and wife about sexuality are because they feel it is taboo, which can cause feelings of shame, fear that their partner will be offended. In addition, factors that can influence sexuality include: considerations. development, getting used to healthy living and healthy conditions, roles and relationships, cognition and perception, culture, values and beliefs, self-concept, coping and tolerance for stress, previous experiences, sexuality or individual sexual experiences can influence life.

Conclusion

1. The length of time a patient undergoes hemodialysis in the Malahayati room of dr. Saiful Anwar Hospital, Malang >24 months as much as 41.80%
2. The male patients with CKD undergoing hemodialysis in the Malahayati Room of dr. Saiful Anwar Hospital, Malang, had their sexual needs as much as 51.90%.
3. The results of the Chi Square test show that there is a relationship between the length of time undergoing hemodialysis and the fulfillment of sexual needs in male patients with Chronic Kidney Failure in the Malahayati Room of dr. Saiful Anwar Hospital, Malang.

Ethics approval and consent to participate

Before conducting research, the researcher first submitted a letter requesting permission to carry out a code of ethics at the Ethics Commission of dr. Saiful Anwar Hospital, Malang with number: 400/130/K.3/102.7/2023.

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