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Distress Manifestations Experienced and Coping Strategies Employed by Patients with End-Stage Renal Disease

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Abstract:- The increasing population of end-stage renal disease (ESRD) in the country is apparent and crucial. ESRD patients experience enormous distress and to cope with the difficulties faced by these individuals is immensely relevant to alleviate their suffering and improve quality of life. The present study aimed to determine the level of distress manifestations experienced and the extent of coping strategies employed by patients with ESRD in the hemodialysis unit of a private tertiary hospital in Naga City, Camarines Sur.

This study employed the sequential explanatory mixed method of research. Thirty respondents who were diagnosed with ESRD, aged 18 and above, and underwent weekly hemodialysis treatment were included in the study. A quantitative (descriptive-evaluative) approach was used to determine the level of distress manifestations experienced by the ESRD patients along physical, mental, psychological, psychosocial, and spiritual; and determined the extent of coping strategies employed along the five distress manifestations experienced. The qualitative approach was made by conducting an in-depth interview to explore the other contributory factors of coping strategies employed by ESRD patients.

Based on the results of the study, it was concluded that the level of distress manifestations experienced by ESRD patients were as follows: a.) physical- low; b.) mental- low; c.) psychological- low; d.) psychosocial- low; e.) spiritual- very low. Whereas the extent of coping strategies employed by ESRD patients along the five areas were the following: a.) physical- high; b.) mental- moderate; c.) psychological- very high; d.) psychosocial- moderate; e.) spiritual- high. The identified other contributory factors of coping strategies employed by ESRD patients were: a) strong support system, b) strengthened spirituality c) stable financial support, d) aid of the medical team (nurses and doctors), and e) adaptation.

The researcher designed an intervention plan to help patients employ coping strategies that will lessen distress and adapt to their disease situation, therefore, achieve well-being and quality of life.

Keywords:- *Adaptation, Mental, Physical, Psychological, Psychosocial, Spiritual.*

I. INTRODUCTION

End-stage renal disease (ESRD), commonly referred to as chronic kidney disease (CKD) stage 5, is the final and irreversible stage of kidney disease in which the kidneys' ability to function independently has been compromised. ESRD has no known cure; patients undergo renal replacement therapies such as Hemodialysis, peritoneal dialysis, and kidney transplants to prolong their longevity. Patients may experience various symptoms and distress as kidney failure progresses (John Hopkins Medicine, 2023).

According to the National Kidney Foundation Inc. (2022), ESRD has a profound impact on both the physical and mental health of a patient, causing depression, anxiety, sleep disturbances, fatigue, cognitive impairment, sexual dysfunction, physiological changes, and other potential complications that can affect any part of the body. ESRD patients find it challenging to handle distress on their own; they may wonder if they can cope well enough with the distress manifestations brought on by this condition. Help and support from family, relatives, friends, and medical professionals are critical.

Distress is a physical, emotional, psychological, social, mental, and spiritual pain or suffering that may cause a person to feel sad, afraid, anxious, depressed, or lonely. This can affect the way a person thinks, feels, acts, and copes with changes caused by normal life occurrences or by having a terminal illness such as ESRD. Patients with ESRD continue to experience suffering despite receiving medical assistance. Their quality of life is compromised, and they experience varying restrictions in activities of daily living. They may have trouble coping with their diagnosis, physical symptoms, and treatment regimen (National Kidney Foundation, 2022).

Psychological distress is a common occurrence in patients with ESRD and has been linked to increased morbidity and premature mortality. Research indicates that psychological discomfort associated with end-stage renal disease (ESRD) is lessened when patients' coping strategies align with the requirements of their renal treatment regimen (Stavpoulou et al., 2017).

With the many challenges and burdens brought on by end-stage renal disease, a patient uses coping strategies to ease unpleasant emotions and manage distress. Coping occurs in the context of life changes that are perceived to be stressful. Changes are stressful because they require people to adapt and adjust. Life with end-stage renal disease and its treatment is distressing, particularly in the early weeks and months. They cope with the constant threat of death, reduced life expectancy, decreasing physical strength, and an intrusive medical regime.

The majority of patients and their families experience a period of grief as they attempt to deal with the illness's demands, the substantial effects on relationships and work, the fear of receiving lifelong treatment, the disruption of daily life, and the adjustment to numerous lifestyle changes (Good Therapy, 2023).

Their coping method, or how they assess the stress and what coping skills they have, determines how ESRD patients respond to the changes in their lives brought about by these recurrent stressful experiences. Research indicates that individuals with end-stage renal disease (ESRD) encounter diverse degrees of life satisfaction and employ an extensive array of coping strategies to oversee their ailment and day-to-day existence (Gilbar et al., 2017).

The management of long-term diseases in general, and patients with renal disease specifically, requires support for individuals who struggle emotionally and psychologically. Providers of national renal guidelines are required by the Department of Health and the National Institute for Health and Care Excellence to offer emotional and psychological support. Some research has found that distress is hard to recognize in the renal unit by the staff. Most patients are reluctant to verbalize their feelings and emotions. Doctors may prioritize clinical over emotional issues during time-pressured consultations. Nurses and healthcare assistants often develop close relationships with patients over time and may be well-placed to provide emotional and psychological support.

However, their ability to do this effectively may be mediated by issues such as staff education and training, perceived role and capacity, confidence, time, and knowledge. Existing barriers at the renal unit that prevent staff from effectively managing patient distress would need to be overcome if appropriate interventions are to be developed and targeted toward patients whose support needs are greatest (Combes, G., & Damery, S., et al., 2019).

There are an estimated 4.902 to 7.083 million patients with end-stage renal illness who require renal replacement treatment. The rise in the prevalence of diabetes mellitus, hypertension, obesity, and aging is the primary cause of the global increase in this illness. (Cheng, J. et al., 2019).

In 2017, the global prevalence of chronic kidney disease (CKD) was 9.1%, or equivalent to roughly 700 million cases. According to the United States Renal Data Report 2020, nearly 786,000 people in the United States are living with ESRD, with 71% on dialysis and 29% with a kidney transplant. Moreover, The CKD mortality rate has increased over the years (Certa Therapeutics, 2017)

According to the National Kidney and Transplant Institute (2022), seventh among Filipinos' major causes of mortality is ESRD. Every hour, or over 120 Filipinos per million people annually, suffer from chronic renal failure. In 2020, the World Health Organization recorded that the Philippines had a total of 39,380 deaths caused by kidney disease (National Nutrition Council, 2022).

In the Bicol Region, a total of 5,095 were diagnosed with ESRD receiving Hemodialysis from the year 2016 to 2020 (Incidence and Prevalence of Chronic Kidney Disease in the Bicol Region; List of Dialysis Facilities, 2021). The health committee in Naga City found that the ten dialysis centers in Naga City, Camarines Sur, are no longer enough for those undergoing dialysis. Some patients even travel to Iriga City to undergo Hemodialysis (Brigada News Philippines, 2022).

The population of patients being diagnosed with end-stage renal disease or CKD 5 in the country is continuously rising in number. The mortality rate is significantly higher than those without the disease. Even with patients receiving renal replacement therapy (RRT) such as dialysis, death rates vary from 20% to 50 % over 24 months. Nevertheless, many patients with ESRD on regular RRT can often live longer approximately 10 to 30 years. It depends largely on how well they follow their treatment plan and dialysis schedules, and other existing health conditions (Hashmi, et al., 2022).

It is of pivotal importance that ESRD patients adapt to the new changes and routines of their daily living, brought by this condition. Unable to cope, makes a person with ESRD− distressed, hopeless, and non-compliant. With the use of coping strategies in the five identified areas − physical, mental, psychological, psychosocial, and spiritual, distress may be overcome and lessened.

Consequently, the present study was conducted to explore the different distress manifestations experienced and coping strategies employed by ESRD patients. This is to further enhance their coping abilities, to deal with the difficulties come across in this phase of survival and eventually adapt to their disease situation, hence, alleviating distress, and promoting quality of life and holistic well-being.

II. RESEARCH QUESTIONS

The study determined the level of distress manifestations experienced and the extent of coping strategies employed by patients with end-stage renal disease (ESRD) in the hemodialysis unit of a private tertiary hospital.

➢ *Specifically, this Study Answered the Following Problems:*

- *What is the level of distress manifestations experienced by the patients with end-stage renal along:*

✓ Physical
✓ Mental
✓ Psychological
✓ Psychosocial
✓ Spiritual

- *What is the extent of coping strategies employed by the patients with end-stage renal disease along the five distress manifestations experienced?*
- *Are there significant differences among aspects of distress manifestations experienced and the extent of coping strategies employed by patients with end-stage renal disease?*
- *What other factors contribute to the coping strategies employed by patients with end-stage renal disease?*
- *What intervention plan may be proposed based on the result of the study?*

➢ *Scope and Delimitation of the Study*

The study aimed to determine the level of distress manifestations experienced and the extent of coping strategies employed by patients with end-stage renal disease in a tertiary hospital in Naga City that caters to many health and medical services including hemodialysis. The distress manifestations experienced and coping strategies of the ESRD patients were determined along with physical, mental, psychological, psychosocial, and spiritual aspects.

Thirty (30) patients diagnosed with end-stage renal disease, both male and female, aged 18 and above, who had previously received hemodialysis (HD) treatment for more than (3) three sessions, were included in the study. Patients on hemodialysis may be scheduled twice or thrice per week, with each HD session lasting four (4) hours, depending on whether they are walk-ins or admitted to the hospital.

Patients with ESRD who are admitted to the Intensive Care Unit (ICU) with a Glasgow Coma Scale (GCS) score of 13 or less, as well as patients with generalized body weakness, bedridden, difficulty breathing, and showing symptoms of neurologic toxicities such as confusion, hallucination, and coma, were excluded from the study as such situations would impair their ability to provide accurate and sound information. ESRD patients from other adjacent private hospitals, government hospitals, and dialysis centers are also excluded as respondents in this study.

III. LITERATURE REVIEW

➢ *Distress Manifestations Experienced by ESRD Patients*

When chronic kidney disease, or the progressive loss of kidney function, reaches an advanced stage, it is referred to as end-stage renal disease or kidney failure. The kidneys no longer function as they should to meet the demands of the body in ESRD. Urine is the result of the kidneys filtering wastes and extra fluid from the blood. The body may accumulate hazardous amounts of fluid, electrolytes, and waste products when the kidneys are unable to filter waste products out of the blood. Dialysis, a kidney transplant, or conservative therapy to control the symptoms in order to maximize quality of life in the remaining time are required for patients with ESRD (Mayo Clinic, 2023).

In the early stages of chronic kidney disease, there may be no symptoms or indicators. Signs and symptoms of end-stage renal disease (ESRD) include nausea, vomiting, loss of appetite, fatigue, weakness, changes in urine output, chest pain if fluid accumulates around the heart, dyspnea, and swelling of the ankles and feet if fluid accumulates in the lungs. Another possibility is uncontrollable high blood pressure or hypertension. Additional symptoms include trouble falling asleep, diminished mental acuity, spasms and cramps in the muscles, continuous itching, and a metallic taste. Kidney disease signs and symptoms are frequently nonspecific, which means they can also be brought on by other conditions. Because the kidneys can make up for lost function, signs and symptoms might not appear until irreversible damage has occurred (Mayo Clinic, 2023).

Diseases and conditions that can lead to kidney disease include type 1 or type 2 diabetes, high blood pressure, glomerulonephritis (an inflammation of the kidney's filtering units, or glomeruli), interstitial nephritis (an inflammation of the kidney's tubules and surrounding structures), polycystic kidney disease, and other inherited kidney diseases. For some people, kidney damage can worsen over months or years before the underlying condition is resolved. There could be a prolonged obstruction of the urinary tract, from conditions such as, enlarged prostate, kidney stones, and some cancers, Vesicoureteral reflux, a condition that causes urine to back up into the kidney, Recurrent kidney infection, also called pyelonephritis (Sparrow Health Systems, 2023).

Diabetic patients with poorly controlled blood sugar are among the characteristics that make it more likely for chronic kidney disease to advance faster to end-stage renal disease (ESRD). The glomeruli, the kidney's structures that filter waste from the blood, may be affected by kidney disease. Moreover, a family history of renal failure, advanced age, high blood pressure, tobacco use, polycystic kidney disease, American Indian or Black background, Asian, Pacific Islander, or Hispanic ancestry, and frequent use of drugs are more likely to develop kidney disease (Mayo Clinic, 2023).

Once renal damage has occurred, it cannot be undone. Potential complications can affect almost any part of the body and include heart disease; weak bones and an increased risk of bone fractures; anemia; decreased sex drive; erectile dysfunction; reduced fertility; damage to the central nervous system, which can cause difficulty concentrating; personality changes or seizures; decreased immune response, which increases vulnerability to infection; pericarditis, an inflammation of the saclike membrane that envelops your heart (pericardium); and pregnancy complications that carry risks for the mother and the

developing fetus, malnutrition, irreversible damage to the kidneys eventually requiring either dialysis or a kidney transplant for survival (Mayo Foundation for Medical Education and Research, 2023).

Healthy lifestyle choices can help slow the progression of kidney disease. These include eating a balanced diet low in salt and protein, exercising frequently, keeping a healthy weight, controlling blood pressure, taking prescribed medications, having annual cholesterol tests, controlling blood sugar, abstaining from tobacco use, and receiving regular checkups (Better Health Channel, 2021).

Patients with end-stage renal disease (ESRD) tend to overestimate their social, psychological, and physical quality of life, which contributes to higher distress levels. People receiving hemodialysis or living with transplants nevertheless have enormous unmet physical and psychological obstacles related to adjusting to a new way of life. A considerable patient burden may result from the consequences of long-term immunosuppressive pharmaceutical therapy and its adverse effects, infection control practices, continuous kidney function monitoring, and regular clinic visits (McKeaveney, C., et al., 2022).

- *Coping Strategies of ESRD Patients*

For patients with end-stage renal illness, adjusting and coping are extremely stressful. These patients may experience fear, worry, rage, and depression as they adjust to life on dialysis. Persistent and ongoing stress can be harmful to one's health and well-being. Continuous stress can have an emotional and intellectual impact, causing impaired focus and memory, disorientation, loss of sense of humor, anxiety, rage, impatience, fear, and sadness. Learning to cope with stress efficiently can help to relax both the body and the mind (London Health Sciences Centre, 2022).

Support from family, friends, and healthcare providers is critical for individuals with ESRD as they deal with the difficulties of treating the condition and its long-term impact on their health. They tend to hide their sentiments and emotions because they do not want to be a burden to their relatives and friends, which makes managing their health condition more difficult. Even if they struggle occasionally, people with ESRD lead incredibly prosperous lives. Having a basic activity to turn to, making goals like attending an event, and maintaining as many regular routines as possible, can be some coping mechanisms that might be beneficial. Understanding the illness and actively participating in its management, may involve medication, monthly laboratory testing, consultations, and rigorous adherence to the recommended food and fluid intake (National Kidney Foundation, 2017).

Since they may grow close to patients over time, renal nurses may be especially qualified to offer emotional and psychological assistance. However, data suggests that patients tend not to spontaneously communicate emotional problems in clinics, or that they do so indirectly through verbal and non-verbal indicators; a few small-scale studies also suggest that renal staff find it difficult to identify distress. Moreover, physicians tend to prioritize clinical and medical concerns above emotional ones during brief visits. Therefore, there is a lack of knowledge regarding how staff recognizes and addresses patient distress, as well as potential obstacles, despite data that suggests unmet requirements related to distress among renal patients may have substantial effects on patients' lives. A more extensive mixed-methods study with patients and staff filled this evidence gap. Talking about distress needs to become "normalized" by ingraining in the culture of the renal unit the importance of providing emotional support. There should be readily available, informal support systems, and training on both proactive and reactive patient distress identification and management provided to all renal staff members. In order to prevent staff burnout from rising in tandem with a growing focus on managing patient suffering, it is crucial that personnel receive emotional support (Combes, G., & Damery, S., et al., 2019).

Studies reveal that coping mechanisms are mental and behavioral responses to stressful situations. According to Lazarus and Folkman (2018), these coping mechanisms can be categorized as problem-focused (PF) or emotion-focused (EF), which distinguishes the roles of coping as directly addressing the problem or its emotional and mental consequences, respectively. Adaptive and functional values were assigned to coping methods based on the results of later research, and the preservation of social functioning and well-being as well as the removal of stressors or distress were used to measure the effectiveness of the techniques. Further studies have demonstrated that in terms of emotional responses and performance levels under pressure, problem-focused coping works better than emotion-focused coping.

A significant question about how renal patients manage their condition emerges from the two coping-with-stress models (cognitive and mental): Is there a connection between mental adjustment, psychological distress, and problem- and emotion-focused coping strategies (PF and EF)? The majority of the current research on the psychological distress of patients with ESRD focuses on the traits and prevalence of depression in this population. Coping mechanisms and psychological discomfort in the context of end-stage renal disease are the subject of very few studies. One of the first findings said that individuals with ESRD receiving dialysis gradually lost use of their active coping mechanisms.

Patients utilize problem-focused coping techniques more frequently than emotion-focused coping, and they experience psychological and physiological pressures equally. Furthermore, they discovered no connection at all between coping mechanisms and stressors. Murdaugh ranked the order of the coping answers listed in the Jalowiee Coping Scale in order to study the coping strategies used by dialysis patients. Of the 20 coping mechanisms that were selected, the top 11 were problem-focused. Regarding the relationship between coping strategies and personal resources, Blake and Courts found that patients between the ages of 50 and 60 who had received dialysis for less than

eight years had less than twelve years of education, did not differ based on gender, and tended to use more emotion-focused coping techniques (Gilbar, O., et al., 2017)

According to Lindqvist et al. (2017), males believed they could handle the physical side of the illness better than women. Although it has been discovered that mental adjustment, as a coping mechanism, plays a significant role in influencing psychological discomfort in the majority of chronic illnesses, such as breast cancer, immunodeficiency virus infection, muscular dystrophy, leukemia, lymphoma, and cervical cancer.

End-stage renal disease (ESRD), commonly referred to as end-stage renal failure, is the last, irreversible stage of chronic kidney disease, characterized by a deterioration in kidney function to the point where the kidneys are no longer able to function independently. Dialysis or a kidney transplant are the only ways an end-stage renal failure patient can live more than a few weeks. As kidney failure worsens, patients may have a wide range of symptoms. Some of these symptoms include bone pain, tiredness, headaches, dry and itchy skin, weight loss, nausea, changes in the skin and nails, and easy bruising. Blood tests, urine tests, kidney biopsy, kidney ultrasonography, and CT scans can all be used by doctors to diagnose the illness.

According to the National Center for Chronic Disease Prevention and Health Promotion, about 30 million Americans, or 15% of the adult population, are thought to have chronic kidney disease, Before it develops into end-stage renal failure or causes further health issues, chronic kidney disease is frequently treatable. Diabetes, high blood pressure, heart disease, drug addiction, urinary tract obstructions, family history, inflammation, and certain genetic diseases are some of the risk factors for developing chronic kidney disease, which may eventually result in end-stage renal failure. Furthermore, failing to adequately manage chronic kidney disease might lead to the illness's progression and eventual end stage. (Hopkinsmedicine.org, 2023).

IV. MATERIALS AND METHODS

➢ *Research Design*

This study employed the sequential explanatory mixed method of research. A quantitative (descriptive- evaluative) approach was used to determine the level of distress manifestations experienced by the patients with end-stage renal disease along physical, mental, psychological, psychosocial, and spiritual; and to determine the extent of coping strategies employed by the patients with end-stage renal disease along the five distress manifestations experienced. The qualitative approach was made by conducting an in-depth personal interview to explore the other factors contributory to the coping strategies employed by patients with end-stage renal disease.

➢ *Respondents of the Study*

The present study included thirty (30) patients diagnosed with end-stage renal disease (ESRD), also known as chronic kidney disease (CKD) stage 5, aged 18 years and older, who were undergoing hemodialysis treatment for more than three (3) sessions at a hemodialysis unit in a private tertiary hospital. The respondents are residents of Camarines Sur who travel to Naga City to receive hemodialysis treatment. Some respondents reside in Naga City.

Patients with ESRD admitted to the Intensive Care Unit (ICU) of the institution with a Glasgow Coma Scale (GCS) score of 13 or less, as well as patients with generalized body weakness, bedridden, difficulty breathing, and symptoms of neurologic toxicities such as confusion, hallucinations, and coma, were excluded from the study because their ability to provide accurate and sound information would be compromised.

The quantitative and qualitative data were collected for two (2) weeks using a non-probability purposive sampling design. This is to allow the researcher to conduct the study without jeopardizing patient's health condition and obtain accurate data by excluding respondents who are unable to grasp and understand the questions and may have difficulty in cooperating due to unstable vital signs or medical condition. Some respondents refused to answer the questionnaire and to be interviewed due to sudden changes in mood and reports of physical discomforts such as dizziness, fatigue, difficulty breathing, and chest pain.

➢ *Data Gathering Instrument*

The present study made use of an instrument adapted to the affluence of the Distress Thermometer (DT) by the National Comprehensive Renal Network (NCCN) (2018). A one-item, 11-point Likert scale represented on a visual graphic of a thermometer that ranges from 0 (no distress) to 10 (extreme distress) using a Problem List which includes problems from 5 areas of life: practical, family, emotional, spiritual/religious, and physical problems; from SUDS-Subjective Units of Distress Scale developed by Joseph Wolpe (1969). This is a useful way for patients to express to doctors and nurses about their experience of distress regarding their disease condition, and had been used in cognitive- behavioral treatments for anxiety and distress. The questionnaire underwent Peer review composed of nephrologists affiliated with the Hemodialysis Unit and the renal nurses in a tertiary private hospital. After the Peer review, the questionnaire was reviewed by the research panel at Universidad de Sta. Isabel, de Naga Inc. Pilot testing of the questionnaire was conducted on ten (10) patients with end-stage renal disease not included as respondents of the study. The Cronbach's Alpha of the pre-testing of the questionnaire has a result of .840 which validates its reliability to be used as research instrument of the present study.

The questionnaire contains three (3) parts. The first part focuses on the distress manifestations experienced by the patients with end-stage renal disease along physical, mental, psychological, psychosocial, and spiritual. The second part involves the extent of coping strategies employed by the patients along the five distress

manifestations experienced. The third part of the questionnaire employed an in-depth interview, which was used to gather information about the other factors that contributed to the coping strategies employed by patients with end-stage renal disease.

➢ *Data Gathering Procedure*

Permission was obtained from the Dean of the Graduate School in Universidad de Sta. Isabel, de Naga Inc. to conduct the present study, and a certification was issued by the statistician confirming that the questionnaire had been validated and approved for use as an instrument for collection of the quantitative data.

A letter requesting approval to administer questionnaires and interview patients with end-stage renal disease was submitted to the nursing service of the private hospital where the study was conducted. Following approval, the hemodialysis unit of the hospital was advised of the study, indicating that data gathering might occur during the patients' hemodialysis sessions.

Patients were requested to sign an informed consent agreement to participate in the study during their check-up and/or hemodialysis treatment appointment date. Only those ESRD patients who have signed the informed consent form were considered respondents of the present study. During gathering of data, the researcher guided the participants, commented, and elaborated on each item of the questionnaire for further understanding and used the dialect or language favored by the patients. To ensure proper transcription of the participants' responses on in-depth interview, an audio recorder was used.

➢ *Data Analysis*

This undertaking utilized Mean in determining the level of distress manifestations experienced and coping strategies employed by patients with end-stage renal disease along physical, mental, psychological, psychosocial, and spiritual.

One-Way ANOVA on the other hand was used to determine the significant differences among aspects of distress manifestations experienced and extent of coping strategies by patients with end- stage renal disease.

Thematic presentations were used for qualitative data gathered from the interview guide- questions on the other factors that contributed to the coping strategies employed by the patients with ESRD. The responses of the participants were analyzed by a common grouping of answers, from these responses, various themes that would best describe them were derived, interpreted, and discussed.

➢ *Ethical Considerations*

Prior to the conduct of the study, a letter of approval from the hospital's nursing service had been obtained. Written consent was signed by qualified respondents, and if a patient is unable to sign the consent, the consent from a legal representative will be signed. The consent stated that the patients agree to participate in the study and that they fully understand the purpose of the study, including the risks and inconveniences this may cause which is the time to be taken from them while completing the questionnaire and answering the questions during the interview. This may interfere their resting and sleeping periods during hemodialysis session and may be wearied because of several items to answer.

The respondents were not forced to participate and were informed that they are free to join or refuse and may also withdraw during the participation of the study for any reason. It was guaranteed that all information acquired will be handled in the strictest confidence. Only data from this study will be submitted or presented at research conferences; and participants' identities will not be disclosed.

Through participation in this study, respondents may contribute to the improvement of care and management of their distress manifestations experienced, as well as the enhancement of coping strategies employed by patients battling end-stage renal disease, giving them hope that they, too, can live a quality life despite the challenges they face with ESRD.

V. RESULTS AND DISCUSSION

This section summarizes findings on the level of distress manifestations experienced and the extent of coping strategies employed by patients with end-stage renal disease in Tables 1 to 2. Table 3 presents the differences in the level of distress manifestations experienced by patients with ESRD. In contrast, Table 4 presents multiple comparisons in the level of distress manifestations experienced by patients with ESRD.

The differences in the extent of coping strategies employed by patients with ESRD are presented in Table 5. Table 6 presents multiple comparisons in the extent of patients' coping strategies with ESRD.

Table 1 The Level of Distress Manifestations Experienced by Patients with ESRD

Indicators	Mean rating	Interpretation
Physical distress manifestations	2.41	Low
Mental distress manifestations	2.48	Low
Psychological distress manifestations	2.59	Low
Psychosocial distress manifestations	2.33	Low
Spiritual distress manifestations	1.55	Very Low
Overall mean	2.27	Low

Legend: 4.21- 5.0 Very High 3.41- 4.20 High 2.61- 3.40 Moderate 1.81-2.6 Low 1.0- 1.80 Very low

Table 1 presents the summary of ratings on level of distress manifestations experienced by patients with end-stage renal disease along physical, mental, psychological, psychosocial, and spiritual. Mean rating was 2.27, categorically a low level of distress manifestations. Psychological had the highest rating of 2.59, interpreted as low; followed by mental distress with a mean of 2.48, also indicative of a low level. Physical distress obtained a mean of 2.41, followed by psychosocial distress of (2.33), interpreted as low. Spiritual manifestation had the lowest level of distress manifestations with a rating of 1.55, a very low level.

In the present study, psychological distress manifestations among patients with ESRD were caused by fear and anxiety about treatment, surgery, and death. ESRD patients suffer considerable psychological distress, apart from the physical and other domains of this study. ESRD and its treatment have an adverse impact on the psycho-emotional status of patients with end-stage renal disease.

The mental distress manifestations experienced by the respondents have cognitive abilities that are ineffective in thinking, understanding, and remembering. Some of them are already forgetful, some have trouble understanding what is being said, and yet others struggle to put their thoughts and feelings into words in a more understandable way.

The data revealed that patients have a low level of distress manifestations experienced in the physical aspect. Physical distress has been manifested in these patients due to the symptoms and complications of the disease itself and to the procedure of treatment and effects of the treatment, such as hemodialysis. Even though starting dialysis is a life-changing event, it is likely to maintain an active lifestyle. They might, however, live a different life now than they experienced before starting dialysis. This might enable the majority of ESRD patients to carry on with their regular physical activity, healthy diet, social activities, and close relationships. (Health Direct, 2023).

Most of the respondents are ambulatory, functioning, and coherent. This is due to strict adherence to therapy, a healthy renal diet, ongoing medication maintenance, a strong social network, and assistance and support from the doctors and nurses who care for them during each HD session and offer health education about dietary modifications, fluid restrictions, vascular access care, infection prevention, and other matters.

The data further revealed that patients have a low level of psychosocial distress manifestations experienced. The emotional and social side effects of therapy, hemodialysis, or surgery led to less social interaction and work withdrawal in respondents, which in turn caused psychosocial distress. Most of the respondents rely on their families to complete ordinary household chores, but some of them still attempt to cook, water plants, and fold clothes. Because most patients have open relationships with their friends and family, particularly within families, they can easily communicate their ideas and feelings during stressful or anxious moments.

The least distress manifestations experienced among ESRD patients is spiritual. Despite the difficulties they were experiencing, this strengthened their faith and confidence in the Lord. It is the source of their life, hope, and will power. The findings also showed that these patients' ability to pray privately and communicate with God is not severely deficient.

A study about “Psychiatric comorbidity and quality of life in patients undergoing hemodialysis,” by Elhadad, A. et al, (April 7, 2020), concluded that the incidence of psychiatric illness among end-stage renal disease patients on hemodialysis is high. The most prevalent psychiatric disorders among these patients are depression and anxiety disorders as well as poor quality of life (QOL) has been observed in patients with ESRD.

According to Dr. Shaikh Ahmed (Neurological Health, 2022), uremic toxins can build up and cause vascular damage and stroke, which can result in dementia and cognitive impairments. On the other hand, nausea, restlessness, drowsiness, diminished focus, and cognitive impairment are among the initial symptoms. The person may eventually experience confusion, emotional instability, and disorientation.

As kidney failure worsens, patients may have a wide range of symptoms. These include bone pain, drowsiness, headaches, dry and itchy skin, weight loss, nausea, changes in the skin and nails, easy bruising, and exhaustion or a decrease in the need to urinate. A number of conditions, including diabetes, high blood pressure, heart disease, drug addiction, urinary tract obstructions, inflammation, certain genetic diseases, and family history, increase the chance of developing chronic kidney disease, which can eventually result in end-stage renal failure. Furthermore, failing to appropriately manage chronic kidney disease can lead to the illness's progression to end-stage (John Hopkins Medicine, 2023).

Psychosocial stressors associated with end-stage renal disease (ESRD) are multifaceted. The condition and its treatment methods require several lifestyle modifications. The impacts of illness and treatment, dietary and hydration constraints, functional impairments, sexual dysfunction, uncertainty about the future, and death anxiety are a few of these. Psychosocial stresses among dialysis patients may also be influenced by shifts in family roles and other changes in responsibilities. Common psychological issues include delirium, depression, anxiety, withdrawal, and a lower quality of life (Almutary H., 2022).

Several studies have shown that spirituality is a vital need for these patients. Spirituality allows patients to examine the meaning, importance, purpose, and direction of their life, diseases, or suffering. In certain circumstances, faith becomes one of the patient's key resources for dealing with pain, disease progression, and its repercussions. In any event, many researchers and doctors believe that assessing and prioritizing spirituality are critical components of integrated, holistic therapy for patients with serious health

conditions and end-of-life situations. In many circumstances, hemodialysis patients and their families turn to spirituality or religion as a fundamental source of hope in these situations. In this context, it has been demonstrated that spiritual well-being is systematically and significantly connected to the quality of life, social support, degree of satisfaction, decreased symptoms of depression, greater contentment with nephrological treatment, and higher survival rates (Nefrologia, 2023).

Table 2 The Extent of Coping Strategies Employed by Patients with ESRD

Indicators	Mean rating	Interpretation
Physical coping strategies	3.85	High
Mental coping strategies	2.95	Moderate
Psychological coping strategies	4.24	Very high
Psychosocial coping strategies	3.17	Moderate
Spiritual coping strategies	4.13	High
Mean	3.66	High

Legend: 4.21- 5.0 Very High 3.41- 4.20 High 2.61- 3.40 Moderate 1.81-2.6 Low 1.0- 1.80 Very low

Table 2 presents the summary on the extent of coping strategies employed by patients with end-stage renal disease along physical, mental, psychological, psychosocial, and spiritual. Mean rating of the five aspects of distress manifestations and their corresponding coping strategies was categorically a high rating of 3.66. Rank 1 with a mean rating of 4.24 a very high rating, was along psychological coping strategies. Physical and spiritual coping strategies had high ratings of 3.85 and 4.13, respectively.

Most patients in this study use reframing negative thoughts into positive ones as part of the psychological coping strategies utilized by them. They believe that being constantly troubled by their condition will only weaken their state of health and disposition to go through life. They also associate with other patients in similar situations and acknowledge positive remarks they share.

The second highest coping strategy employed by ESRD patients is spirituality. Some patients, at the onset of the disease, had apprehensions and frustrations but with the aid of prayer, they eventually learn to accept and understand that this has become a part of their lives and that treatment is a lifelong commitment. The respondents employ spiritual coping strategies that will help them understand the purpose of this experience. This includes their religion as a significant element in gaining strength; religious actions such as prevailing prayer, reading the Holy Bible, attending Holy Mass, receiving Holy confession and Holy Communion, praying, and meditating in the Blessed Sacrament.

According to the study of Santos, P. et al, (2017) on "Religious coping methods predict depression and quality of life among ESRD patients undergoing hemodialysis: a cross-sectional study," hemodialysis (HD) patients with ESRD have been found to have poor QOL and a significant rate of depression. They sought to assess the relationships between coping strategies that are religious or spiritual and QOL and depression in patients with end-stage renal disease receiving hemodialysis. Their study's findings indicate that among HD patients, religious and spiritual coping strategies may have an impact on depression and quality of life. Therefore, it is important to promote the use of religious resources and try psycho-spiritual therapy to address patients' religious issues while they are enduring HD. It only takes a few seconds to say a prayer, but it has a significant impact on one's attitude, conduct, and capacity to overcome obstacles in life (Well-being & Happiness, 2023).

Moreover, the third highest coping strategy employed by the respondents was the physical aspect. It demonstrates that these patients religiously adhere to hemodialysis treatment, medication, renal diet, and fluid restriction, and engages in mild activities and exercise to lessen symptoms and prevent complications of ESRD. Patients with end-stage renal disease need to stay physically active. Exercise (a type of exercise agreed upon by the doctor) improves overall health and increases the quality of life by helping fight fatigue and depression (Preferred vascular group, 2022).

The fourth-highest coping strategy employed by the respondents was the psychosocial aspect. This only indicates that they continue to seek medical assistance to monitor their condition. They still interact with friends, patients with the same condition, and families. Socializing with people they know and trust provides them with a sense of strength, encouragement, and reinforcement.

Strong social ties are associated with a lower incidence of depression, hypertension, and an unhealthy body mass index (BMI), among other serious health issues. Research indicates that older persons with strong social networks and meaningful interactions are likely to live longer than their counterparts with fewer ties (Mayo Clinic, 2023).

The data further revealed that the least employed coping strategy was mental coping. Only some patients take brain enhancer supplements to help improve memory, focus, and mood. Such supplements were fish oil, omega-3 fatty acid supplements, and vitamin B complex as prescribed by the doctor.

Studies have indicated that maintaining brain health and sharpness can be achieved in a variety of ways. Playing crossword or jigsaw puzzles, reading quality literature, and engaging in other brain workouts can all help improve memory, focus, and concentration.

A study by Fissler, P., et al, (2018) on "Jigsaw Puzzling Taps Multiple Cognitive Abilities," has shown that solving jigsaw puzzles is a preventive factor against visuospatial cognitive aging and mobilizes multiple cognitive abilities. One of the best ways to test and involve the brain is to put together a jigsaw puzzle by examining individual pieces and determining their placement within the overall design.

The process of reading is intricate and requires the activation of several brain regions. When reading, the brain's left frontal lobe becomes active to interpret letters and words. The limbic system then stimulates emotions to receive and remember information, while the front temporal lobe examines the tenor and flow of words. This will activate several brain activities, which will aid the brain in increasing its capacity for remembering. Fluency, phonemic awareness, understanding, and visual and auditory processes are all involved in reading. Because reading is neurologically demanding, it is a mental workout (Reading at the Speed of Thought, 2023).

Table 3 Differences in the Level of Distress Manifestations Experienced by Patients with ESRD

	Sum of squares	df	Mean Square	F	Sig.	Interpretation
Among Aspects	7.060	4	1.765	3.685	.009	Significant difference
Within Groups	29.219	145	.479			
Total	36.279	149				

Table 3 presents the differences in the level of distress manifestations experienced by patients with ESRD. It shows that the F value of 3.685 and the Sig. of .009 indicate significant differences among the five aspects of distress manifestations.

The findings of the data show that there are significant differences among aspects of the distress manifestations experienced by patients with ESRD. This means that the manifestations of the different distress aspects vary.

Distress can go from an expected level to one that interferes with treatment, makes it hard for ESRD patients to function, and affects all parts of their lives. Patients with mental distress such as trouble sleeping, eating, or concentrating, may lead to physical distress namely headache and body weakness, or may cause psychological distress that includes frequent thoughts of illness and or fear of death.

As per the World Health Organization (2023), being in good health encompasses more than just the lack of illness or disability; it also involves total physical, mental, emotional, and social well-being. Well-being is influenced by a network of interrelated elements. The interdependence of the mind, body, spirit, social and cultural aspects, emotions, interpersonal connections, context, and environment are all addressed in holistic treatment. Since each of these elements contributes to the person, the holistic nurse considers all factors and how they may impact the patient's health to heal the individual (Nursing Theory, 2023).

Table 4 Multiple Comparisons in the Level of Distress Manifestations Experienced by Patients with ESRD

(I) areas 1)	(J) areas 1	Mean Difference (I-J)	Sig.	Interpretation
Physical	Mental	-.09333	.998	No significant difference
	Psychological	-.20152	.992	No significant difference
	Psychosocial	.05167	.998	No significant difference
	Spiritual	.84067	.013	Significant difference
Mental	Psychological	-.10818	.998	No significant difference
	Psychosocial	.14500	.994	No significant difference
	Spiritual	.93400	.047	Significant difference
Psychological	Psychosocial	.25318	.933	No significant difference
	Spiritual	1.04218	.009	Significant difference
Psychosocial	Spiritual	.78900	.128	No significant difference

Table 4 presents the comparison in the level of distress manifestations experienced by patients with ESRD. The data reveals that there are significant differences between physical, mental, and psychological distress manifestations to spiritual distress manifestations with the Sig. value of .013, .047, and .009, respectively.

When a patient is physically distressed and manifests many health-related complications, this may affect his or her ability to connect and give time for prayer and meditation. The respondents of this study were not able to attend Holy Mass every Sunday, go to confession, and visit the Blessed Sacrament due to physical incapability.

On the other hand, lack of prayer, loss of faith, hope, and meaning in life may put an impact on the physical health of the patients, because most of the respondents concluded during the interview that when they pray and ask God's sovereign guidance and empowerment, they gain physical and emotional strength and a sense of peace and purpose.

An individual's health and outlook are greatly enhanced by the serenity that results from sustaining a relationship with God. Perseverance via prayer has a tremendous effect on life quality. The physiological effects of stress can be lessened or eliminated by prayer, in addition to the well-known psychological and physiological benefits of frequent prayer. This effect cannot be overstated because stress is a major contributor to many bodily issues (How Spiritual Health Affects Your Physical Health, 2017).

There is also a significant difference between mental distress and spiritual distress experiences as revealed in the data. ESRD patients who tend to read the bible, reflect on it, and gain knowledge from the word of God may improve their cognitive function thus reducing mental distress. Attending religious services may be associated with improved cognitive health since religious services often include cognitively engaging activities like applying scripture study or discussing discourses. Prayer's beneficial correlation with memory could be explained by its possible cognitive demands. For example, it might take memory to remember whom to pray and why. Because prayer promotes relaxation and reduces tension, it may help with memory. (Dimensions of Religious Involvement Represent Positive Pathways in Cognitive Aging, 2019).

The data further revealed that there is a significant difference between psychological distress and spiritual distress experiences. Patients with ESRD in this study who are likely to pray, have a deep connection with God, and meditate have lesser psychological distress and the prevalence of depression and anxiety among the respondents is not that high.

Moreover, prayer helps lessen emotions of dread, anxiety, and loneliness. Rituals of prayer have a calming effect. They provide a perception of influence or control over something that may not ultimately be within one's power, and they divert the mind from potentially pointless anxiety (CNN, Health, 2023).

Table 5 Differences in the Extent of Coping Strategies Employed by Patients with ESRD

	Sum of squares	df	Mean Square	F	Sig.	Interpretation
Among Aspects	11.813	4	2.953	4.100	.007	Significant difference
Within Groups	31.690	145	.720			
Total	43.502	149				

Table 5 presents the differences in the extent of coping strategies employed by patients with ESRD. The computed F value is 4.100 indicating a significant difference in the extent of coping strategies employed along the five (5) aspects.

Patients with ESRD employ different coping strategies that help them deal with the life changes brought by this illness. Coping mechanisms are as different and numerous as the distresses that give rise to them. Patients use a variety of coping mechanisms, some of which may be unproductive or even harmful to the patient or another, or they may serve to reduce stress and encourage favorable results. These mechanisms are interconnected and can influence one another.

Common strategies for coping responses are accepting the situation or one's role in it, active or confrontive coping by seeking social support, planful problem solving such as following treatment and medication regimen, positive reappraisals such as creating a positive meaning and refraining from thinking about their condition, seeking social support, turning to religion, using humor, and venting emotions.

A study by Han, et al., 2019 on "Biopsychosocial experiences and coping strategies of patients with ESRD," reported that their quality of life was affected by ESRD and dialysis in three interrelated areas: (a) biological/physical (general symptoms, neuromuscular issues, skin issues, and poor sleep quality); (b) psychological (depressive symptoms, anxiety and fears, stress, and negative self-perceptions); and (c) social (increased dependence on family and loss of social life). Participants employed four main coping mechanisms: a) family support (material, emotional, and financial); b) religious/spiritual support (prayer, experiencing thankfulness and contentment, and being a part of a faith community); c) avoidance (distraction tactics and cognitive avoidance); and d) acceptance (positive thinking and problem-solving). These coping mechanisms can be used to advance the creation and application of more comprehensive and person-centered services that will assist each patient in achieving a higher quality of life.

Table 6 Multiple Comparisons in the Extent of Coping Strategies of Patients with ESRD

(I) areas 1)	(J) areas 1	Mean Difference (I-J)	Sig.	Interpretation
Physical	Mental	.79364	.315	No significant difference
	Psychological	-.49273	.655	No significant difference
	Psychosocial	.57664	.533	No significant difference
	Spiritual	-.38636	.834	No significant difference
Mental	Psychological	-1.28636	.024	Significant difference
	Psychosocial	-.21700	.985	No significant difference
	Spiritual	-1.18000	.043	Significant difference
Psychological	Psychosocial	1.06936	.045	Significant difference
	Spiritual	.10636	.998	No significant difference
Psychosocial	Spiritual	-.96300	.101	No significant difference

The data revealed that there is a significant difference between the extent of mental and psychological coping strategies. Psychological coping strategies consist of strategies that patients with end-stage renal disease employed to regulate their degree of emotional and mental distress. Patients who have a low degree of depression and anxiety may have more attention span, concentration, and focus. These patients are the ones who accept and appreciate the understanding, love, and care they receive from family, friends, and relatives and refrain from thinking about their illness too often.

A significant difference between the extent of mental and spiritual coping strategies of patients with ESRD was also revealed. Most of the respondents gain strength, motivation, and enlightenment of the mind and heart as praying is part of their everyday routine. Respondents in the study have said during the personal interview, that even crossing the streets, riding in a public vehicle, and heading home needs prayer, so they may be guided and protected and it works every day. Each small act they do has a prayerful companion. For them, one cannot perform even the simplest task without a clear and steady mind.

According to the study by Leal, et al., (2022), "Praying for Miracle: Negative or Positive Impacts on Health Care," the psychology literature has examined the impact of miracle belief, as a spiritual or religious coping mechanism, on the psychological well-being and overall health of patients and their families. Even in the modern era, when the supposed conflicts between science and religion ought to have been resolved long ago, there is still a propensity to understand faith in miracles as the chance for healing provided by divine intervention altering the normal course of events in a dismal medical diagnosis – with detrimental effects on health care and treatment.

This seeks to find a base in the three characteristics of hoping for a miracle, frequently pointed out by psychological literature: a) it would imply a negation of reality instead of its confrontation; b) it would be a coping strategy focused on emotion instead of the problem; c) it will imply seeking to modify the supposed desire of God by extra natural facts. Through the use of SRC scales, which classify asking for a miracle as a negative strategy, the position and risks of its crystallization were critically explored in this study. Examining the several aspects of miracles, sociocultural realities, and components in healthy environments, the study reexamines key trends in some psychological literature on the topic. Two examples of research conducted in the Brazilian context—one with pregnant women who had fetal malformations, and the other with family members caring for children and adolescents with cancer undergoing chemotherapy—illustrated the perils of making a hasty generalization of the findings of nomothetic studies regarding the role of belief in miracles. The findings from both investigations refute the predominance of the negative aspects associated with the act of praying for a miracle, which was discussed and analyzed considering the phenomenological perspective. In this perspective, "praying for a miracle," as experienced by patients and caregivers, can be recognized as an act of openness to life (instead of isolation in a bleak perspective), bolstering hope, and the resignification of reality in the psyche.

The data further revealed that there is a significant difference between the psychological and psychosocial coping strategies of patients with ESRD. These patients use psychosocial coping strategies to manage their relationships with themselves and others, socialize with friends and family, and manage psychologically by expressing and verbalizing their thoughts, feelings, and emotions in order to lighten and relieve their burdens. In the personal in-depth interview, the patients' families—who are always there to help and support them, listen to their worries and concerns, offer comfort, and ease uncomfortable feelings, anxiety, and sadness—were identified as the main source of support that helped them cope and ultimately gain self-confidence and a sense of belonging.

According to the study by Bulut, S. (2019) on "Socialization Helps the Treatment of Depression in Modern Life," psychosocial coping strategies refer to the ways of relating to self and others; socializing with family and friends, and to have verbalization of feelings of anxiety and distress. Treatment for this disease is time-consuming and costly, and in certain cases, access to mental health specialists and medical resources is limited. Consequently, one should identify the cause of the issue and look for different forms of treatment. The study focuses on treating this psychological health issue using an unconventional method. One of the main causes of depression, according to research, is social support deficiency, loneliness, and isolation. People will be able to go through challenging situations with ease and fluency if they can receive some level of social and emotional support. As a result, they need access to natural environments to practice socialization.

- *Other Contributory Factors to the Coping Strategy Employed by Patients with ESRD*

During the in-depth interview, other contributory factors to the coping strategies employed by patients with end-stage renal disease were explored. The verbatim quotations from the personal interview are used to support the findings and conclusions.

The original statements of the respondents who used the Bicol or Tagalog dialect are placed in the appendix of this study. The researcher has made translations in English as close to the original meaning of their answers.

Five themes emerged from the interview: a) strong support system, b) strengthened spirituality c) stable financial support, d) aid of the medical team (nurses and doctors), and e) adaptation. Two themes were most emphasized that helped them cope: a strong support system and their spiritual communication with God. A support system is composed of family members (spouse and or children) friends, relatives, and or religious groups. The experience of having ESRD led them to be closer to God and deepen their faith and spirituality.

The paramount importance of financial support has also been highlighted in their responses to maintain them on hemodialysis treatment. Correspondingly, the vital functions of the medical team were mentioned by the patients, specifically the renal nurses and doctors, for the conservation of their health and treatment regime. As months and years went by, from the start of their diagnosis, some of these patients have adapted to the situation and abide by them during their lives.

The following answers were considered from the other contributory factors that helped the patients with ESRD cope with the distress manifestations they experienced.

VI. DISCUSSION

The research's principal goal is to determine the level of distress manifestations experienced and the extent of coping strategies employed by patients with end-stage renal disease. This is to explore the different distress experiences of ESRD patients and the coping strategies they employ in five aspects: physical, mental, psychological, psychosocial, and spiritual. The other factors that contributed to the patient's coping strategies were also identified through personal interview. Thus, this study employed both quantitative (descriptive-evaluative) and qualitative research designs to determine the level of distress experiences and extent of coping strategies employed by ESRD patients and the other factors that contributed to their coping strategies. The present study also determined the significant differences among aspects of distress manifestations experienced and the extent of coping strategies employed by patients with ESRD.

VII. CONCLUSION

Patients with end-stage renal disease had the highest distress manifestations experienced along the psychological aspect (low level), followed by mental distress (low level). A low level of physical distress was also noted, followed by psychosocial distress (low level). The lowest was spiritual distress (very low level).

Regarding coping strategies employed, the psychological aspect was the highest among the five distress manifestations that ESRD patients experienced. This was followed by the spiritual (high extent of coping), physical (high extent of coping), and psychosocial (moderate extent of coping). The lowest coping strategy used was mental (moderate extent of coping).

All these aspects are interconnected and, thus, may affect one aspect if the other is debilitated or distressed. For patients with ESRD, a holistic approach that addresses all facets of their health—physical, mental, psychological, psychosocial, and spiritual—is essential to their improved quality of life.

The other factors that contributed to the coping abilities of these patients are: a) a strong support system, b) strengthened spirituality c) stable financial support, d) aid of the medical team (nurses and doctors), and e) adaptation.

Future researchers seeking to expand on and conduct comparable studies for patients with end-stage renal disease while taking into account a person's holistic characteristics may find the study's findings useful as a resource. This study will challenge and inspire more research to improve the overall health and quality of life for those with terminal illnesses such as ESRD.

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