

## **NURSING CARE OF CHILDREN WITH CHRONIC RENAL FAILURE: A HOLISTIC APPROACH IN THE GENITOURINARY SYSTEM**

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### **Abstract**

This article aims to comprehensively review the literature related to nursing care of children with CKD, especially through a holistic approach to the genitourinary system, as well as analyze the role of nurses in improving the quality of life of patients. The research uses a literature study approach by examining articles from the Google Scholar database, and Garuda. The keywords used include "*pediatric chronic kidney disease*", "*holistic nursing care*", and "*genitourinary system*". Of the 150 articles found, 35 articles were selected according to the inclusion criteria (2013–2024) and analyzed narratively. The findings show that GGK in children not only causes physical complications such as anemia, growth disorders, and hypertension, but also impacts the child's psychosocial, educational, and social relationships. The role of nurses is essential in a holistic approach, including: (1) medical and nursing interventions, (2) psychosocial and emotional support, (3) family education, (4) nutrition monitoring, and (5) innovation through telenursing. Family support has been shown to improve adherence to therapy, while nonpharmacological interventions such as counseling and relaxation therapy help reduce the child's anxiety. A holistic approach in nursing for children with GGK has been proven to improve the overall quality of life of patients. The application of multidisciplinary strategies, family involvement, and the use of technology are the main keys to the success of therapy. This article emphasizes the need to strengthen the role of nurses as educators, family facilitators, and emotional companions in the management of children's GGD.

**Keywords:** Chronic kidney failure, pediatrics, genitourinary system, holistic nursing, quality of life.

### **Background**

The prevalence of chronic kidney failure (CKD) in children is a health issue that is getting more and more global attention. This is reflected in the increasing incidence rate and its prevalence in recent years. Research states that the prevalence of chronic kidney disease globally, including in children, can reach around 1.0% of the total child population (Syafi & Sari, 2022). GGK itself is a complex clinical syndrome characterized by a progressive and irreversible decline in kidney function. This condition is caused by various risk factors, both genetic, metabolic, and environmental.

The main risk factors for GGK include family history, hypertension, diabetes mellitus, and congenital disorders. Hypertension, in particular, is a dominant factor that contributes to chronic kidney damage, especially if left untreated early (Purqotri et al., 2023; Arifa et al., 2017). In addition, children with endocrine system disorders such as obesity and diabetes are also known to have a higher risk of developing GGK (Ningrum, 2022; Purqotri et al., 2023).

Data from various literature suggest that chronic glomerulonephritis is the leading cause of terminal GGK in children. In a study in Medan, it was stated that this disease is the most common cause in children who require kidney replacement therapy such as hemodialysis and kidney transplantation (Ramayani et al., 2016). This condition further emphasizes the importance of early diagnosis and a healthy lifestyle as a preventive strategy to suppress the increase in GGK cases (Diyono et al., 2023).

Furthermore, GGK in children has an impact not only physically, but also psychosocially and economically, both for the patient himself and his family. The need for complex clinical management and psychological support is a challenge in the nursing practice of children with CKD. Children suffering from GGK tend to face decreased quality of life and difficulties in daily activities, and require long-term therapeutic support (Syafi & Sari, 2022; Lolowang et al., 2021).

In this regard, the importance of a holistic approach in pediatric nursing becomes very relevant. This approach includes not only the physical, but also psychological, social, and spiritual aspects. Emotional support,

family education, and the creation of a supportive environment are integral parts of efforts to improve the welfare of pediatric patients with GGK (Rahman et al., 2022).

Therefore, a comprehensive approach that includes early detection, effective management, and public education is a strategic step in reducing the prevalence and improving clinical outcomes in children with CKD. This requires synergy from various disciplines in the health service system (Tasnim & Sunarsih, 2022; Diyono et al., 2023), as well as increasing public awareness of risk factors and the importance of the role of the family in supporting the success of therapy.

Chronic kidney failure (CKD) in children is a serious condition that has a wide impact on various aspects of life, especially the physical growth and overall quality of life of children. Decreased kidney function in the long term causes metabolism, hormonal, and electrolyte disorders which ultimately inhibit optimal child growth and development. Children with GGK are prone to developmental stunts, such as height and weight disorders that are not appropriate for age. This condition occurs because kidney dysfunction affects the metabolism of growth hormone, causing anemia, hypokalemia, and other electrolyte imbalances that aggravate the condition (Erlianda & Rizal, 2016; Pardede & Chunnaedy, 2016). In fact, in many cases, there is a condition of growth retardation similar to stunting.

The impact of GGK is not only physical, but also extends to the psychological and social dimensions of children. Children undergoing hemodialysis therapy experience significant emotional and psychological distress, such as feelings of isolation, anxiety, and depression, especially because they have to undergo repetitive medical procedures that are tiring and time-consuming (Hasanah et al., 2023; Lolowang et al., 2021). This often interferes with children's social and educational lives, leading to decreased academic achievement and difficulty interacting with their peers.

In addition, children with GGK face major challenges in mental health aspects. High levels of stress, unstable moods, and persistent anxiety can hinder a child's emotional development and social adaptability (Rahman et al., 2022). This impact shows that GGK treatment cannot be focused solely on the medical aspect, but must include a comprehensive psychosocial approach.

The nutritional condition of children with GGK is also a major concern. Impaired kidney function causes nutrient metabolism to become inefficient, so that children's nutritional needs are not met. This nutritional imbalance can worsen health conditions, lower immunity, and inhibit neural and brain development (Wati et al., 2019). Therefore, a precise, monitored, and tailored nutritional approach is essential to support optimal survival and growth of children.

Seeing the complexity of the impact caused, a comprehensive and holistic GGK handling system is needed. This includes early detection, nutrition monitoring, appropriate nursing interventions, psychosocial support, and education for families so that they can be an active part of the child's care process (Pardede & Chunnaedy, 2016; Rahman et al., 2022). Structured and multidisciplinary treatment can help improve the quality of life of children with GGK, improve growth and development, and reduce the long-term burden on both patients and their families.

In dealing with the complexity of chronic kidney failure (CKD) conditions in children, the role of nurses is crucial, especially through the application of a holistic approach. This approach places the patient as a whole individual, not only seen from the physical side, but also includes emotional, psychological, social, and spiritual aspects. Nurses are expected to be able to integrate all these aspects in daily nursing practice, so that the care provided really touches the overall needs of patients.

In the context of GGK, nurses not only play a role in routine medical procedures, but also have an important responsibility in helping patients live their daily lives with an optimal quality of life. Research shows that many GGK patients experience a significant decline in quality of life, covering aspects of physical health, psychological well-being, social relationships, and the surrounding environment (Lolowang et al., 2021). Therefore, nursing interventions need to be directed not only to address the symptoms of the disease, but also to improve the overall well-being of the patient.

Health education is one of the main pillars of a holistic approach. Nurses have a key role in providing patients and families with an understanding of disease conditions, treatment procedures such as hemodialysis, and the importance of adherence to treatment (Jumain et al., 2023). Effective education has been proven to be able to

increase patients' self-efficacy in managing their illnesses and build a more proactive attitude towards the healing process (Sary, 2022; Aisyah et al., 2023).

Family support is also an integral part of nursing care. Families who are actively involved in the treatment process can help improve the patient's adherence to fluid settings, diet, and other therapeutic routines (Oka, 2023). This is where nurses are required to establish effective communication with families, in order to clearly explain the complexities of GGK and encourage their participation in supporting patients (Jumain et al., 2023).

In addition to the educational and family support aspects, attention to the patient's emotional state is an important element in holistic nursing practice. Children undergoing hemodialysis or long-term treatment are prone to experiencing stress, anxiety, and decreased morale (K.K. & Akbar, 2023). Non-pharmacological interventions such as relaxation therapy, positive affirmation, and psychological counseling have been shown to improve patients' emotional stability and mental health (Rahman et al., 2022).

As technology develops, nurses can also leverage telenursing to facilitate remote communication and monitoring of patients. This innovation is especially helpful for children with mobility limitations or who live far from healthcare centers. Telenursing allows nurses to continue to provide education, monitoring, and emotional support on an ongoing basis (Rasmia & Mulyono, 2022).

Thus, the application of a holistic approach by nurses in treating children with GGK will not only improve the clinical aspect, but also improve the overall quality of life of the patient. Nurses are required to be able to act as educators, emotional companions, family facilitators, and technological innovators in order to provide more humane and sustainable care.

## **Methodology**

This article uses a literature review approach with the aim of identifying, analyzing, and synthesizing various scientific findings related to nursing care for children with chronic kidney failure (CKD) through a holistic approach in the genitourinary system. Data Sources Literature search is carried out through international and national scientific databases, namely: Google Scholar and Garuda (Garba Reference Digital). In addition, official guidelines from the Indonesian Ministry of Health and international organizations such as WHO and KDIGO (Kidney Disease: Improving Global Outcomes) are also used as references.

## **Results and discussion**

### **Pediatric Genitourinary System**

The child's genitourinary system is one of the important aspects of children's health who are very susceptible to disorders, both congenital and acquired. Disruptions to this system can lead to a variety of complications, including impaired kidney and urinary tract function, such as urinary tract infections (UTIs), congenital disorders, and functional changes due to chronic kidney disease. One of the common congenital abnormalities is hypospadias, which is a condition in which the urethra does not open at the tip of the penis as usual, but at the bottom of the penis. Hypospadias often require surgical intervention to correct the location of the urethra, which not only aims to improve urinary tract function, but also considers the psychological aspects of the child that can be significantly affected by the disorder (Feng et al., 2023).

Meanwhile, chronic kidney failure (CKD) in children is a form of disorder of the genitourinary system that is complex and requires long-term attention. GGK is characterized by a progressive and irreversible decline in kidney function. Several factors such as type 1 diabetes and celiac disease are known to contribute to worsening kidney function in children (Nurmi et al., 2022; Starcea et al., 2024). In addition, children with GGK are at high risk of developing growth disorders, malnutrition, mental health disorders, anemia, and hypertension that require comprehensive treatment (Irwanto et al., 2021; Gheissari et al., 2012; Jain, 2023). These conditions require integrated management, involving medical teams from various disciplines to maintain the quality of life of children.

Urinary tract infections are also one of the genitourinary problems that often occur in children and can cause permanent kidney damage if not treated properly. Early diagnosis and prompt management are essential to prevent long-term complications. One of the promising biomarkers in the early detection of kidney damage due to UTIs is neutrophil gelatinase-associated lipocalin (NGAL), which can be used as a non-invasive and accurate marker in assessing the condition of the urinary tract of children (Forster & Devarajan, 2016).

Furthermore, the impact of disorders of the genitourinary system is not limited to excretory function alone, but also affects other systemic aspects such as dental and oral health. Children with GGK often experience

oral problems such as gingivitis and enamel hypoplasia due to metabolic changes and long-term treatment effects (Andaloro et al., 2018; El-Saied et al., 2021). This demonstrates the importance of a multidisciplinary approach in the care of children with kidney disorders, which involves not only pediatricians and nurses, but also dentists, nutritionists, and other health professionals.

In the context of nursing, nurses have a very important role in the management of children with CKD. Nurses are not only responsible for the physical and medical aspects, but also provide education to families about the importance of adherence to therapy, monitoring of red flags, and regular health check-ups. Family involvement is an integral part of a holistic approach that aims to improve the quality of life of children and prevent further complications (Tasić et al., 2016). Therefore, the nursing approach to children with disorders of the genitourinary system must be comprehensive, individualized, and focused on the physical, mental, social, and spiritual well-being of the child.

### **Basic anatomy and physiology**

Understanding the basic anatomy and physiology of children is very important in nursing care, especially in cases of chronic kidney failure. Children's body systems, including the genitourinary system, have different structural and functional characteristics compared to adults, so the nursing approach applied must also be adjusted. Anatomically, the child's organs are still in the stage of growth and maturation. For example, the size of a child's heart is relatively smaller, and the lungs experience an increase in capacity with age, which has an impact on the body's overall breathing patterns and metabolism (Syifa et al., 2019; Nahdiyah et al., 2024). This understanding is important to support clinical decision-making and appropriate interventions in children with chronic kidney disorders, where fluid and electrolyte homeostasis are highly dependent on the synergistic functioning of other organ systems.

From a physiological perspective, important processes such as metabolism, cell growth, and immune response are greatly influenced by the nutritional status and environment of the child. Nutrition is a key factor in supporting the growth of important organs, including the kidneys. Exclusive breastfeeding in the first year of life has been shown to support neurological development and strengthen the child's immune system, which can indirectly prevent the risk of kidney disease due to recurrent systemic infections (Rayhana & Rizalvi, 2020; Arifin et al., 2018). In addition, external factors such as parental parenting, emotional support, and social environment also determine a child's holistic health. Children who grow up in families with supportive parenting patterns tend to have more stable emotional and social development, and show higher resilience in the face of chronic diseases such as kidney failure (Qotrunnada & Darmiyanti, 2024; Wijirahayu et al., 2017).

Positive parenting not only increases emotional attachment between children and parents, but also has a significant impact on treatment success and adherence to therapy. Conversely, low family socioeconomic conditions and limited access to health services often hinder the early diagnosis and treatment of chronic diseases, including chronic kidney failure, thereby worsening the child's condition (Sanusi et al., 2023; Ligina et al., 2022). In this context, health education for families is crucial. Parents' understanding of the anatomy and physiology of the child's body can help them to be more actively involved in treatment, from symptom monitoring, dietary arrangements, to daily psychological support (Yuda et al., 2023; Billah et al., 2023).

A holistic approach also includes attention to the child's mental health and psychosocial development. Good communication between children and parents as well as a loving environment are key in overcoming psychological stress that may arise due to chronic diseases suffered by children (Sofiana et al., 2023; Gulo et al., 2022; Nahdiyah et al., 2024). In today's digital era, attention also needs to be paid to the use of gadgets by children. Uncontrolled use of technology can interfere with children's sleep, concentration, and social interactions, which will ultimately affect their general health status, including in the management of kidney disease (Sofiana et al., 2023; Gulo et al., 2022; Maimun, 2023).

Therefore, the nursing approach of children with chronic kidney failure is not enough to rely solely on medical interventions, but must also integrate an understanding of the anatomy-physiology of the child, developmental psychology, family factors, and the social environment. Collaboration between nurses, doctors, educators, and families is needed to create an ecosystem that supports optimal child growth and development, even in the midst of chronic disease conditions (Lewoleba et al., 2021; Qotrunnada & Darmiyanti, 2024; Sari et al., 2020).

### **Differences with the genitourinary system of adults**

The child's genitourinary system has different anatomical and physiological characteristics compared to adults, which affect the child's body's response to certain medical conditions. In terms of anatomy, the size of organs such as kidneys, bladder, and urethra in children is much smaller, so the filtration and waste disposal capacity is still limited. Children's kidneys, which have lighter weight and smaller size, contribute to the kidney's

work capacity that is not yet optimal (Nevo et al., 2017). In addition, children's bladders also have a lower volume of hold, which causes them to urinate more often than adults (Senguttuvan & Jigy, 2014). Anatomically speaking, the separation of the genital system is also very pronounced between boys and girls. In boys, genital organs such as the penis have not matured until they reach puberty, which is certainly a concern in medical procedures or invasive procedures (Yoanita, 2022).

Physiological differences also play a big role in the health management of the child's genitourinary system. Kidney function in children is still in the developmental stage and has not reached optimal filtration capacity until late adolescence. This makes them more susceptible to disorders such as dehydration and electrolyte imbalance (Nevo et al., 2017). The decrease in the rate of glomerular filtration (GFR) naturally also explains why metabolic processes in the child's body are not as efficient as that of adults (Senguttuvan & Jigy, 2014). Children also show different responses to illness. For example, urinary tract infections (UTIs) in children often present with non-specific symptoms such as high fever or irritability, different from the symptoms of pain when urinating that are common in adults. This poses challenges in early diagnosis and proper treatment.

In addition, children's developing immune systems make them more susceptible to infections, including genitourinary infections, and can lead to more serious complications (Chozie & Sarita, 2021). Therefore, the clinical implications of dealing with the disease on this system emphasize the importance of an approach tailored to the child's condition. One example is the adjustment of antibiotic doses that must be appropriate to avoid dangerous side effects and achieve maximum therapeutic effectiveness (Nur & Erawati, 2020). Medical intervention in children does not only depend on medical treatment, but also demands the active participation of the family. Education to parents and caregivers about the early signs of genitourinary system disorders is very important to increase awareness and facilitate early detection and early treatment (Fajriyah et al., 2019; Yumna et al., 2023).

By understanding the crucial differences in the genitourinary system between children and adults, health workers can provide more effective and targeted care. Comprehensive and preventive management of the condition of this system will greatly determine the long-term health of children and reduce the risk of serious complications that can affect their quality of life in the future.

### **Chronic Kidney Failure in Children**

Chronic kidney failure (CKD) in children is a progressive disorder of kidney function that lasts for a long time and has a wide impact on the physical, psychological, and social conditions of children. The main cause of GGK in children usually comes from congenital abnormalities or structural and functional disorders of the kidneys that develop from childhood. Some of the diseases that contribute greatly to GGK include renal dysplasia, chronic glomerulonephritis, and hereditary polycystic kidney disease. Among these causes, chronic glomerulonephritis is often reported as the most frequent cause of terminal kidney failure in children (Ramayani et al., 2016). In addition, systemic diseases such as hypertension also play a role in accelerating kidney damage at an early age (Utami, 2020). Understanding this etiology is important for early detection and prevention of disease progression.

In terms of clinical manifestations, GGK in children often causes a variety of systemic and dermatological symptoms. One of the skin symptoms that are often found in children with GGK is pruritus, xerosis (dry skin), and dermatitis, which indicate the accumulation of metabolic waste due to kidney dysfunction (Yonathan & Darmawan, 2021). In addition to skin disorders, children with GGK are also at risk of anemia due to decreased erythropoietin production by the kidneys, as well as physical growth inhibitions due to chronic metabolic disorders (Sholihah et al., 2022). This manifestation worsens the overall health condition of the child and requires an integrated approach in daily care.

In terms of management, the treatment of GGK in children includes a complex medical approach, one of which is through hemodialysis therapy which is used to eliminate metabolic residues such as urea and creatinine from the body. Hemodialysis has been shown to be effective in stabilizing blood biochemical parameters in GGK patients (Yulandi et al., 2021). However, the success of therapy does not only depend on dialysis alone, but also on the ability of the child and his family to perform proper fluid and nutrient management. Nurses have an important role in providing education about fluid management independently, in order to prevent more serious complications such as excess fluid or electrolyte disorders (Sholihah et al., 2022). The active involvement of the family plays a major role in the sustainability of this therapy.

Furthermore, GGK in children has a significant impact on quality of life. Not only physically, but also psychologically and socially. Limited activities due to routine care, chronic fatigue, and limitations in the school and social environment can trigger emotional disorders such as anxiety, social isolation, and depression (Alfonso et al., 2016). Therefore, in addition to medical treatment, psychosocial interventions are important things that should not be ignored in order to maintain children's mental health and optimize their growth and development.

Overall, GGK is a chronic condition that requires thorough and ongoing attention. Optimal treatment requires multidisciplinary cooperation between health workers, patients, families, and the surrounding environment. Through a holistic approach that includes physical handling, education, and emotional support, it is hoped that children with GGK can live healthier, independent, and quality lives.

### **Definition and classification**

Chronic kidney failure (CKD) is a condition characterized by a slow decline in kidney function, persists for more than three months, and is irreversible. This definition has been adopted by the Indonesian Ministry of Health as well as the World Health Organization (WHO) and is widely used in clinical practice to identify patients with impaired kidney function (Sastroasmoro, 2016). In children, this condition has a systemic impact because the kidneys lose the ability to maintain fluid homeostasis, electrolytes, and acid-base balance, so it can cause complications such as hypertension, heart disorders, growth retardation, and anemia (Sholihah et al., 2022).

According to the guidelines of Kidney Disease: Improving Global Outcomes (KDIGO), GGK is determined based on two criteria, namely the glomerular filtration rate (GFR)  $< 60 \text{ mL/min/1.73 m}^2$  for more than three months or the presence of signs of kidney damage such as proteinuria, hematuria, or a description of structural abnormalities on imaging (Bacchetta et al., 2012). The challenge of diagnosing GGK is that it is often asymptomatic in the early stages, so children are usually only detected when kidney damage is significant (Fletcher et al., 2022).

Clinically, GGK is classified into five stages based on the decrease in GFR. Stage 1 is characterized by a GFR  $\geq 90 \text{ mL/min/1.73 m}^2$  with signs of kidney damage, while stage 2 shows a GFR of  $60\text{--}89 \text{ mL/min/1.73 m}^2$ . Stage 3 is divided into 3a (GFR 45–59) and 3b (GFR 30–44), stage 4 shows a GFR of 15–29, while stage 5 is terminal renal failure (GGT) with a GFR  $< 15 \text{ mL/min/1.73 m}^2$  requiring kidney replacement therapy such as hemodialysis or kidney transplantation (Yuliandi et al., 2021).

The causes of GGK in children vary greatly. Congenital anomalies of the kidney and urinary tract (CAKUT) are reported to be the main cause, followed by chronic glomerulonephritis, hereditary polycystic kidney disease, as well as systemic diseases such as hypertension and type 1 diabetes mellitus that progressively impair nephron function (Ramayani et al., 2016; Utami, 2020; Ningrum, 2022). Recurrent urinary tract infections, obesity, and genetic factors can also accelerate kidney damage (Hasanah et al., 2020; Purqot et al., 2023).

Treatment of GGK is focused on slowing down the progression of kidney damage, maintaining residual kidney function, and improving children's quality of life. Strategies include lifestyle changes such as low-protein and salt diets, blood pressure control, and monitoring of blood sugar levels, especially in children with diabetes (Ningrum, 2022; Wijayanti et al., 2024). Medical therapies include antihypertensive, phosphate binders, and erythropoietin supplementation to treat anemia and metabolic complications (Sholihah et al., 2022). In practice, management must be adjusted to age, growth and development conditions, and family support, so it requires a multidisciplinary approach involving pediatricians, nurses, nutritionists, and psychologists (Rahman et al., 2022).

With its complexity, GGK in children demands a sustainable treatment system. An understanding of definitions, classifications, etiologies, and management strategies is an important foundation for early detection and effective intervention. In addition to the medical aspect, attention to family psychosocial support greatly determines the success of therapy and the quality of life of the child (Lolowang et al., 2021).

### **Common causes in children (Causes of Chronic Kidney Failure in Children)**

Chronic kidney failure (CKD) in children is a serious health problem that comes from various etiologies, both congenital and acquired. One of the main causes of GGK in children is congenital abnormalities of the kidneys and urinary tract or known as Congenital Anomalies of the Kidney and Urinary Tract (CAKUT). This disorder accounts for about 60% of all GGK cases in children, and includes conditions such as renal agenesis, renal dysplasia, as well as abnormalities of the ureters that can interfere with the flow of urine and trigger progressive kidney damage (Hasanah et al., 2020).

In addition to congenital factors, acquired kidney diseases such as glomerulonephritis also contribute significantly to CKD. Chronic glomerulonephritis is reported as the highest cause of terminal kidney failure in children in several regions of Indonesia. The disease is usually the result of recurrent infections or autoimmune diseases such as systemic lupus erythematosus (Ramayani et al., 2016).

Metabolic factors such as type 1 diabetes mellitus are also important risk factors. Uncontrolled chronic hyperglycemia can damage the glomerulus and lead to diabetic nephropathy, which eventually triggers GGK. Research states that strict blood sugar control and calorie restriction play a role in slowing down kidney damage (Ningrum, 2022; Wijayanti et al., 2024).

Obesity and metabolic syndrome are now also of particular concern due to their increasing prevalence in the child population. Obesity has been linked to an increased risk of GGK through mechanisms such as insulin

resistance, hypertension, systemic inflammation, and oxidative stress, all of which can accelerate kidney damage (Fahlevi et al., 2024; Purqot et al., 2023).

No less important are infectious factors, especially recurrent urinary tract infections (UTIs). UTIs can spread to the kidneys and trigger nephritis, which has the potential to develop into GGK if not treated thoroughly and in a timely manner (Ramayani et al., 2016). Therefore, early detection and aggressive treatment of UTIs are crucial steps in the prevention of CKD.

In addition, conditions such as neonatal asphyxia, which can occur during childbirth, also contribute to the occurrence of GGK. About 50% of babies who experience asphyxia show signs of organ damage, including kidneys, which can have a long-term impact on their function (Radityo et al., 2016).

Lastly, family history and genetic factors are also important aspects that cannot be overlooked. Children who have family members with a history of kidney disease, such as polycystic kidney disease, have a higher risk of developing GGK (Purqot et al., 2023; Novianti et al., 2023).

Overall, the causes of GGK in children are very diverse and involve congenital factors, systemic diseases, and the environment. Understanding these factors is very important for early detection, timely intervention, and prevention so that further complications do not occur that have an impact on children's quality of life.

## **Discussion**

### **Clinical signs and symptoms**

#### **Clinical Signs and Symptoms of Chronic Kidney Failure (CKD) in Children**

Chronic kidney failure (CKD) in children exhibits a variety of clinical manifestations that can have a significant impact on the child's physical health, psychosocial development, and overall quality of life. The symptoms that arise vary depending on the severity of kidney damage and the stage of the disease. In general, children with GGK often experience fatigue and weakness as a result of anemia caused by reduced erythropoietin production from damaged kidneys (Fletcher et al., 2022). In addition, appetite disorders or anorexia also often occur, causing weight loss and growth disorders due to metabolic and digestive disorders (Pan et al., 2019).

Gastrointestinal symptoms such as nausea, vomiting, and abdominal pain are common complaints caused by the accumulation of toxins in the body due to the failure of the kidneys to carry out their excretory functions (Gipson et al., 2011; Nezhad et al., 2024). In the urinary tract, children with GGK can experience changes in urination patterns, including polyuria or oliguria, as well as hematuria which can be an early indicator of impaired kidney function (Flythe & Watnick, 2024). Swelling or edema of the face, eyes, and other limbs also often occurs due to fluid retention that cannot be effectively excreted by the kidneys (Fletcher et al., 2022; Flythe & Watnick, 2024).

In addition, skin changes such as pruritus and dull skin tone often occur due to high levels of urea and creatinine in the blood, which contribute to reduced sleep quality and comfort in children (Fletcher et al., 2022). Metabolic disorders of minerals such as calcium and phosphorus also occur, which can lead to renal osteodystrophy and interfere with the growth of children's bones (Bacchetta et al., 2012). Not infrequently, neurological complications arise due to the accumulation of waste in the blood, which impacts the central nervous system and causes concentration disorders, anxiety, and depression (Fletcher et al., 2022).

In addition, the cardiovascular aspect cannot be ignored, since hypertension is one of the symptoms commonly found in children with GGK, which significantly increases the risk of future heart and blood vessel complications (Fletcher et al., 2022). Therefore, it is important to carry out early detection and comprehensive management involving medical personnel, families, and social interventions to improve the welfare of children with GGK.

### **Medical diagnosis (laboratory, imaging)**

#### **Medical Diagnosis of Chronic Kidney Failure (CKD) in Children**

The diagnosis of chronic kidney failure (CKD) in children is carried out through a multidimensional approach that includes laboratory examinations and imaging to assess kidney function and identify the underlying cause. Laboratory tests are an important first step, starting with the evaluation of serum creatinine levels, which are the main indicators in assessing kidney function. Increased creatinine levels indicate a decrease in the kidneys' ability to filter (Sastroasmoro, 2016). In addition, glomerular filtration rate (GFR) is also calculated, both through the Cockcroft-Gault and MDRD formulas. GFR values help classify the stages of GGK and estimate the remaining kidney function and potential disease progression (Sastroasmoro, 2016).

Urine analysis is an important follow-up examination, as it can identify proteinuria, hematuria, and glucosuria. These findings provide clues to the type of underlying kidney disorder, such as glomerulonephritis or hereditary nephropathy (Arifin & Rahman, 2023). In addition, checking electrolyte levels such as sodium, potassium, calcium, and phosphorus is also a major focus, as electrolyte imbalance is a common complication in

GGK. Acid-base status checks are also important to assess the kidneys' ability to maintain the body's pH homeostasis, which is usually impaired in GGK patients (Bacchetta et al., 2012). If there are signs of infection, blood cultures and urine tests to detect urobilinogen can be performed to determine whether urinary tract infections contribute to ongoing kidney damage (Bacchetta et al., 2012).

On the other hand, imaging or imaging diagnoses, such as renal ultrasound, are the most commonly performed non-invasive procedures. This examination can provide important information about the size, shape, and structure of the kidneys. Kidneys that are shrinking or have anatomical abnormalities can be an early indicator of chronic kidney disease (Arifin & Rahman, 2023). Ultrasound is also effective in detecting obstructions, kidney stones, and congenital disorders in the kidneys (Ardika et al., 2023). If a more in-depth evaluation is needed, then a CT scan or MRI may be used, especially in cases where complex structural abnormalities are suspected. However, the use of CT scan or MRI is not carried out regularly due to cost and availability limitations (Juairiah, 2019).

Thus, a comprehensive diagnostic strategy is indispensable in managing GGK in children. A proper diagnosis not only provides an overview of the extent of kidney damage, but also helps to understand the underlying cause of the disease, which is an important basis for determining the direction of treatment and holistic nursing care planning.

## **Impact of GGK**

### **The Impact of Chronic Kidney Failure (CKD) on Children**

Chronic kidney failure (CKD) in children is a serious condition that has a significant impact not only on the physical aspect, but also on the psychological, social, and overall quality of life of the child. In the physical aspect, GGK has a direct impact on the growth and development process of children. Metabolic disorders and malnutrition due to decreased kidney function cause growth disorders characterized by delays in height and weight compared to children of their age (Panggabean, 2022; Riyadina et al., 2020; Narsa et al., 2022). One of the most common complications is anemia, which arises due to reduced production of erythropoietin by the kidneys. This condition results in children getting tired quickly, weak, and experiencing a decrease in the quality of daily activities (Saputri et al., 2024; Karinda et al., 2019). In addition, electrolyte imbalances such as hyperkalemia and acid-base disorders in the form of metabolic acidosis are also often found, which can exacerbate systemic symptoms such as muscle weakness, lethargy, and shortness of breath (Narsa et al., 2022; Riyadina et al., 2020).

Psychologically, children with GGA are at risk of cognitive impairment, especially due to the accumulation of uremic toxin before therapeutic measures such as hemodialysis. Several studies have noted improvements in cognitive function after hemodialysis, but not a few children have experienced the disorder from an early age (Manus et al., 2015; Handini & Hunaiifi, 2022). From an emotional and social perspective, chronic conditions such as GGK cause a decrease in confidence, anxiety, and even depression. Children also experience limitations in social interaction, such as playing with peers or actively participating in school activities, which has an impact on identity formation and social development (Panggabean, 2022; Afitasari et al., 2016).

In the broader social aspect, the quality of life of children with GGK has decreased drastically. Frequent medical examinations, invasive procedures, and hospitalizations cause children to feel different and tend to withdraw from their surroundings (Saputri et al., 2024; Riyadina et al., 2020). This burden is also felt by the family, both emotionally and financially. Families need sufficient understanding and education about the child's condition, as well as psychosocial support to be able to provide optimal care (Riyadina et al., 2020).

Long-term complications of GGK are also a major concern. Children with GGK have a high risk of cardiovascular diseases such as hypertension and enlarged heart, which occur due to uncontrolled fluid accumulation and blood pressure (Afitasari et al., 2016; Ningrum, 2022). In addition, the risk of infection increases especially in children undergoing peritoneal dialysis therapy, which can lead to peritoneal infections and worsen the child's general condition (Handini & Hunaiifi, 2022; Karinda et al., 2019). Therefore, the treatment of GGK in children must be carried out holistically by paying attention to various aspects of the child's and family's lives.

## **Physical impact (growth, nutrition)**

### **The Physical Impact of Chronic Kidney Failure on Children**

Chronic kidney failure (CKD) is a condition that has a significant impact on children's physical health, especially in terms of growth and nutritional status. Children with GGK often experience growth retardation due to impaired metabolism, which affects growth hormone production and insulin-like growth factor-1 (IGF-1) activity. Low levels of IGF-1 lead to a decrease in growth rate, which if left untreated can result in suboptimal height (Zha & Qian, 2017; Gerson et al., 2010). Research shows that children with GGK generally experience a decrease in height and weight compared to healthy children, as well as experience slower growth (Dórea et al.,

2024). In addition, metabolic disorders such as metabolic acidosis also affect growth hormone function and increase the risk of long-term growth disorders (Brewer & Hsu, 2022; Mak et al., 2011).

In addition to growth disorders, the nutritional status of children with GGK is also very susceptible to disturbance. Malnutrition is one of the common complications experienced, with a high prevalence of protein-energy wasting (PEW) conditions. This condition is caused by reduced appetite, indigestion, and increased body metabolism due to chronic inflammatory processes that take place in the body of people with GGK (Zha & Qian, 2017; Dórea et al., 2024; Kim et al., 2014). As a result, children lose the muscle mass and fat needed for normal growth and maintenance of the body. On the other hand, the quality of the diet of children with GGK is also often lower than that of healthy children. Insufficient intake of macronutrients and micronutrients worsens the physical condition of the child and contributes to a slowdown in healing and decreased immunity (Kim et al., 2014; Metasyah & Hidayati, 2023).

Changes in nutrient metabolism in children with GGK add to the challenges in meeting nutritional needs. On the one hand, the body needs more energy and protein to support growth; however, on the other hand, the body's energy reserves are limited, thus creating complex nutritional imbalances (Zha & Qian, 2017; Dórea et al., 2024). In addition, children with GGK are also at higher risk of developing other complications such as hypertension and diabetes, which can worsen nutritional status. Both of these conditions require strict diet management and individualization of individual nutritional needs (Gerson et al., 2010; Gjerde et al., 2021).

Another long-term complication of GGK is anemia and an increased risk of cardiovascular disease. Anemia caused by decreased erythropoietin production contributes to a decrease in the child's energy and ability to function normally, which indirectly also inhibits growth (Gerson et al., 2010). Meanwhile, poor nutritional status increases the risk of children developing heart disease later in life, which further complicates the management of chronic diseases (Gjerde et al., 2021; Brewer, 2021).

Overall, the physical impact of GGK on children is complex and requires a multidisciplinary approach to minimize long-term risks. Nutritional interventions, strict growth monitoring, and regular metabolic management are important aspects in improving the quality of life of children with CKD.

### **Psychological impact (emotional, mental)**

#### **Literature Review: The Psychological Impact of Chronic Kidney Failure (CKD) on Children**

Chronic kidney failure (CKD) not only has an impact on the child's physical condition, but also has profound psychological consequences. Children with GGK are prone to various emotional disorders such as anxiety and depression. Research shows that about 30–50% of pediatric patients with GGK experience significant depressive symptoms, most of which are triggered by uncertainty over the disease condition, activity limitations, and long-term treatment (Zhang et al., 2021; Dąbrowska-Bender et al., 2018). Anxiety also often arises due to worries about the future, the effectiveness of treatment, and isolation from normal social activities for children their age.

In addition, mood swings and emotional instability are often found in children with GGK. These mood fluctuations can come from biochemical disorders related to kidney function or side effects of treatment therapy, which can interfere with the child's relationship with his family and social environment (Kim et al., 2021; Jung et al., 2016). These psychological impacts are even more complex when associated with a decline in cognitive function. A significant decrease in glomerular filtration rate (GFR) can impair concentration, memory, as well as information processing ability, ultimately impacting children's academic performance (Dąbrowska-Bender et al., 2018; Silva et al., 2019).

The quality of life of children with GGK is also greatly affected by their mental state. About 60% of children with GGK report a decline in quality of life, which includes physical, psychological, and social aspects (Yalnız, 2024; Pereira et al., 2023). Limited physical activity and reduced social interaction are the dominant factors that inhibit children's psychosocial development. Social stigma due to chronic conditions experienced causes some children to withdraw from the social environment and feel different from their peers (Aghoja et al., 2020; Böhlke et al., 2008). This condition can exacerbate feelings of insecurity and contribute to social isolation.

Not only does it have an impact on children, GGK also puts significant emotional pressure on the family. Older people often experience stress, financial burden, and emotional exhaustion due to a long and intensive treatment process (Duan et al., 2019; Butt et al., 2022). Therefore, psychosocial interventions are important in the management of GGK. Approaches such as cognitive-behavioral therapy, stress management training, and psychological counseling have been shown to help reduce anxiety and improve children's adaptation to chronic conditions (Butt et al., 2022; Silva et al., 2019).

Family involvement is also key in supporting children's mental health. Family education about the psychological impact of GGK and appropriate mentoring strategies can increase children's sense of security and emotional support, ultimately strengthening the quality of interpersonal relationships in the family (Cogley et al.,

2023; Butt et al., 2022). Thus, a holistic approach that includes medical and psychosocial aspects is indispensable to improve the psychological well-being of children with GGK.

### **Social impact (interaction, education)**

#### **Social Impact of Chronic Kidney Failure in Children**

Chronic kidney failure (CKD) in children not only has an impact on physical and psychological aspects, but also has a great influence on their social life. Children with GGK often experience limitations in normal social interactions, especially due to their inability to participate in various physical or social activities such as sports or activities with friends. Absence from such activities creates feelings of isolation and social isolation, which ultimately impacts their ability to form and maintain social relationships (Surani et al., 2023; Adha et al., 2021). In addition, the stigma attached to chronic diseases such as GGK further worsens the psychosocial state of children. Negative perceptions of the surrounding environment or ignorance of their conditions can trigger shyness, low self-esteem, and anxiety, which lowers children's confidence to socialize (Adha et al., 2021).

Family support plays a very important role in helping children cope with these social challenges. Research shows that strong emotional support from the family can improve quality of life and lower depression rates in children with GGK (Widani & Wisnu, 2020). Warm and understanding family relationships are the main foundation for children in dealing with limitations caused by illness.

In addition to the social aspect, GGK also has an impact on children's education. Children with GGK tend to be absent from school often because they have to undergo regular medical treatment, such as hemodialysis. This absence interferes with the learning process and causes academic gaps with peers (Yuliawati et al., 2022). Not only that, cognitive abilities that decline due to GGK, such as difficulty concentrating and memory, also worsen children's academic performance (Desy et al., 2022; Ratnasari et al., 2023). Therefore, consistent educational efforts are needed for both children and their families to increase understanding of the condition of GGK as well as disease prevention and management measures. Proper education can help patients and families in making better decisions, as well as increase awareness of the importance of educational sustainability (Purqotri et al., 2023; Jafar, 2019).

Schools also play an important role in supporting children living with GGK. An inclusive educational environment with support from teachers and peers is very helpful in maintaining children's involvement in school. Adjusting the curriculum and learning schedule is one form of accommodation that can be applied (Yuliawati et al., 2022). In addition, collaboration between families, medical personnel, and schools is needed to provide optimal psychosocial and educational interventions. Intervention programs involving parents, as well as providing education about kidney conditions, can encourage active family involvement in the learning and care process of children (Desy et al., 2022; Surani et al., 2023).

Overall, the social impact of GGK on children is a complex challenge and requires special attention. With a holistic approach, involving various parties such as families, schools, and medical personnel, children with GGK can receive comprehensive support to live more meaningful and quality lives.

### **Spiritual impact (understanding of illness on children & families)**

#### **The Spiritual Impact of Chronic Kidney Failure (CKD) on Children and Families**

The spiritual impact of chronic diseases, such as chronic kidney failure (CKD), on children and their families is an important aspect that is often overlooked in clinical practice. Children diagnosed with GGK often experience changes in the way they understand life, suffering, and the meaning of the condition. In the face of prolonged illness and full of uncertainty, children tend to search for meaning in their experiences. This effort is usually carried out through a spiritual or religious approach as a form of adaptation to suffering, as well as a source of hope and inner strength (Safara et al., 2023).

In addition to the search for meaning, children with GGK also experience complex emotional reactions, such as confusion, fear, and even rejection of their condition. Studies show that positive spirituality can have a significant impact on reducing anxiety and helping children accept the realities of their lives more calmly (Safara et al., 2023; Alvarenga et al., 2017). This shows that spirituality is not only a psychological support aspect, but also an integral part of the process of children's emotional adaptation to chronic diseases.

In addition, the family as the main support unit plays an important role in the child's spiritual process. Spiritual support from the family, both emotionally and through shared religious practices, helps children in managing the challenges faced (Balboni et al., 2013). Not infrequently, families also experience high levels of stress due to psychological stress due to long-term care and worries about the child's future. In these conditions, families often seek spiritual reinforcement to help them cope with stressful situations (Balboni et al., 2013).

Furthermore, involvement in regular spiritual practices—such as prayer, worship, or joint religious activities—has been shown to improve emotional well-being and connectedness between family members

(Ghazalsafou, 2023). This activity also strengthens the sense of common purpose and resilience of the family in facing life's challenges. In this case, spirituality is a bridge in building solidarity and fostering a deeper meaning to the experience of illness (Alvarenga et al., 2021).

In the context of health services, a spiritual approach is increasingly considered important in pediatric nursing practice. A holistic approach that includes a spiritual dimension can help children and their families to deal with feelings of uncertainty, fear, and improve the overall quality of life (Brémault-Phillips et al., 2015). Health workers who have an understanding of the role of spirituality are able to provide more humane interventions, such as spiritual counseling or religious activities tailored to the patient's needs. The involvement of professionals from the mental and spiritual health field, such as psychologists, clergy, or counselors, is an important part of an integrated support strategy (Safara et al., 2023; McCaffrey et al., 2016).

As such, it is important for healthcare workers to not only focus on the physical aspect, but also actively explore the spiritual needs of patients and families. Spiritual strengthening has been proven to help the coping process, provide inner peace, and improve the quality of life of children and families in dealing with mental health disorders. The implementation of structured and collaborative spiritual support can be an important component in improving the quality of child nursing services holistically.

### **A Holistic Approach in Congenital Glaucoma Nursing**

A holistic approach in congenital glaucoma nursing involves a thorough understanding of the patient's physical, mental, emotional, and social condition. Congenital glaucoma is a rare but serious eye disorder, characterized by increased intraocular pressure from birth or infancy. This condition is complex and demands a nursing intervention that not only focuses on the medical aspect, but also pays attention to the overall well-being of the patient and his family. According to Vinod et al. (2017), congenital glaucoma often requires an interdisciplinary approach due to the link between medical complications, long-term effects on vision, and psychological impact on the child and his or her family.

Medically, congenital glaucoma can be accompanied by other conditions such as congenital cataracts, which add complexity in its treatment. Treatment of glaucoma generally requires surgery, and must consider the risk of complications such as fluid leakage, endophthalmitis, and retinal detachment (Al-Zubi et al., 2023). The success of therapy depends on the timeliness of surgical intervention, evaluation of disease severity, and readiness for postoperative rehabilitation (Kim et al., 2010). Therefore, the holistic approach emphasizes the importance of close collaboration between ophthalmologists, nurses, and patients' families in the planning and execution of medical procedures.

Long-term monitoring is another crucial aspect of a holistic approach. Patients with congenital glaucoma are at risk of significant visual developmental impairment if not monitored regularly. Mahendra & Andari (2022) stated that environmental factors such as exposure to ultraviolet rays also affect the development of cataracts, so the role of nurses in providing education about eye protection and self-care is very important. Active involvement of families in understanding the importance of ongoing monitoring will support optimal long-term treatment outcomes.

In addition to the physical aspect, support for the emotional and psychosocial conditions of children and families is an integral part of a holistic approach. Research shows that anxiety and stress in patients and families can hinder the effectiveness of therapy if not handled properly (Panneer Selvam et al., 2021). Nurses have a strategic role in providing psychological support, educating families about the condition of the disease, and helping them adapt to the changes that occur. Ambushe et al. (2023) emphasize the importance of attention to the mental well-being of patients and their families, as part of a well-rounded nursing intervention.

Multidisciplinary teamwork is also indispensable in this holistic approach. The involvement of various health professionals such as ophthalmologists, child psychologists, nutritionists, and nurses allows for comprehensive and integrated care planning. According to Liu et al. (2017), congenital glaucoma has the potential to cause blindness if not treated appropriately, so expertise from various fields is needed to manage risk and determine targeted treatment strategies.

Overall, a holistic approach in congenital glaucoma nursing provides an important foundation for patient-oriented nursing practices as a whole. By paying attention to medical, psychosocial, and continuing education aspects, nurses can improve the quality of life of children with congenital glaucoma and support their families in undergoing a long and challenging treatment process.

### **Physical Approach in Glaucoma Nursing**

The physical approach in glaucoma nursing emphasizes actions that are directly related to the assessment and management of the patient's physical condition. Glaucoma is a chronic disease characterized by increased intraocular pressure (IOP) which can cause permanent damage to the optic nerve and lead to blindness if not

treated properly. Therefore, comprehensive physical intervention is essential in order to prevent further complications and maintain the patient's quality of life.

**1. Physical Assessment**

The first step in the physical approach is to conduct a thorough assessment of the patient's eye condition. This includes intraocular pressure measurements using tonometry, examination of the fundus of the eye to identify optic nerve damage, and field-of-sight evaluation to determine the extent of vision loss. In addition, subjective symptoms such as eye pain, red eyes, or blurred vision should be carefully considered. According to Kwak et al. (2022), comorbidities such as ocular trauma or systemic diseases such as diabetes mellitus also affect the complexity of handling glaucoma patients.

**2. Medical Management**

Physical management includes the administration of pharmacological therapy to lower intraocular pressure. This therapy typically involves the use of topical medications such as prostaglandin analogues, beta-blockers, or carbonic anhydrase inhibitors. These drugs work through various mechanisms, such as increasing the outflow of intraocular fluid or decreasing its production (Sever & Yarimağa, 2023). Strict monitoring of drug effectiveness as well as detection of side effects is an integral part of this physical approach. In addition, patients undergoing glaucoma surgery should be closely monitored postoperatively as complications such as infection or inflammation can worsen the final outcome (Gedde et al., 2012).

**3. Surgical Procedure**

If medical therapy does not provide optimal results, surgical interventions such as trabeculectomy or shunt placement are the main alternatives. This procedure is aimed at lowering intraocular pressure more permanently. However, this approach also comes with the risk of complications, such as damage to the structure of the eyeball or severe postoperative inflammation. Constantin et al. (2018) and Shah et al. (2022) emphasize the importance of thorough evaluation before surgery, as well as the need for optimal physical and psychological preparation of patients to improve postoperative prognosis.

**4. Education and Support**

Another important component of the physical approach is patient education. The nurse plays a role in explaining the treatment procedure, the importance of adherence to the therapy regimen, as well as information about postoperative care. In pediatric patients, parental involvement is needed to support the success of treatment. Clear education and adequate support have been shown to improve compliance as well as prevent avoidable complications (Mohammadpour et al., 2019).

**5. Symptom treatment and medical therapy**

A holistic approach in the treatment of glaucoma and cataracts focuses not only on physical or medical interventions, but also considers the emotional, educational, and quality of life aspects of the patient as a whole. Glaucoma and cataracts are two ocular conditions that are often intertwined, with the potential to significantly degrade visual function if not treated optimally. Therefore, the therapy applied must be integrative, including medical therapy, patient education, and continuous monitoring.

In the medical aspect, therapy for glaucoma generally begins with the use of topical medications such as beta-blockers, prostaglandin analogues, and carbonic anhydrase inhibitors. This combination therapy has been shown to be effective in controlling intraocular pressure (IOP), especially in patients with open-angle glaucoma (Lavia et al., 2017; Vold et al., 2016). For patients who do not respond optimally to pharmacological therapy, the Minimally Invasive Glaucoma Surgery (MIGS) procedure may be an option. This approach provides greater hope for stable control of eyeball pressure with a lower risk of complications. For patients at risk of postoperative complications such as diabetic macular edema, intravitreal dexamethasone implants have shown effectiveness in reducing macular thickness and improving postoperative visual outcomes (Kabanarou et al., 2020).

Meanwhile, cataracts are more commonly treated through surgical interventions, especially the phacoemulsification procedure, which is the standard method of cloudy lens removal and replacement with an intraocular lens (Chen et al., 2025). Before surgery is performed, some conservative interventions such as the use of glasses or contact lenses can be applied to improve temporary vision. In some cases, especially if the visual impairment has not interfered with daily activities, periodic observation without medical action may be chosen (Chen et al., 2025). However, for patients undergoing cataract surgery, close postoperative monitoring is essential. Complications such as cystoid macular edema (CME) can be prevented or controlled with the use of topical steroids such as dexamethasone as well as educating patients about the symptoms to look out for (Bélair et al., 2009).

Furthermore, the holistic approach also includes the patient's mental readiness and understanding of the therapy undertaken. Active involvement of patients in the medical decision-making process, provision of clear information about prognosis and side effects of medications, and psychological assistance are integral to

improving clinical outcomes and overall quality of life. Research by Chen et al. (2025) emphasizes the importance of integrating glaucoma and cataract therapies in one combined procedure when needed, which has been shown to provide more optimal vision outcomes (Rodrigues et al., 2018).

Thus, a holistic approach to medical therapy and symptom treatment in patients with glaucoma and cataracts must be multidimensional. This strategy not only prioritizes aspects of medical treatment and surgical procedures, but also pays attention to health education, emotional support, and strengthening the involvement of patients and their families in the treatment process. Such a comprehensive approach is expected to be able to prevent complications, increase the effectiveness of therapy, and improve the overall quality of life of patients.

### **Psychological Approach**

#### **A Holistic Approach in Glaucoma and Cataract Nursing**

A holistic approach in glaucoma and cataract nursing involves a comprehensive intervention that includes physical, psychological, and social aspects to improve the patient's overall quality of life. These two conditions, although pathophysiological different, both have a significant impact on the patient's vision and well-being, requiring an integrated and individualized treatment strategy. Medically, glaucoma management focuses on lowering intraocular pressure through pharmacological therapies such as beta-blockers, prostaglandin analogues, or carbonic anhydrase inhibitors, as well as surgical procedures such as Minimally Invasive Glaucoma Surgery (MIGS) or trabeculectomy (Lavia et al., 2017; Vold et al., 2016; Laroche & Scheive, 2022). Meanwhile, the main therapy for cataracts is phacoemulsification surgery which replaces cloudy lenses with intraocular lenses (Chen et al., 2025). However, both have a risk of postoperative complications such as macular edema, which need to be controlled with anti-inflammatory drugs such as dexamethasone implants (Kabanarou et al., 2020; Bélair et al., 2009).

From a psychological aspect, glaucoma and cataracts often cause anxiety, stress, and depression due to uncertainty in eye conditions and potential vision loss. Therefore, a holistic approach needs to include emotional support and psychological therapy. Swandewi et al. (2024) emphasize the importance of positive psychological therapy to help patients build a more adaptive mindset and focus on self-strength, especially during the treatment process or waiting for intervention. In addition, family support plays an important role in improving patient adherence to treatment, given the value of collectivism in Indonesian culture that places social relationships as a source of strength (Himawan, 2024). Peer support groups can also be formed to increase a sense of community and reduce social isolation (Kusniawati, 2018).

Active stress management needs to be part of nursing interventions, such as the application of relaxation, meditation, and deep breathing techniques, which have been shown to lower anxiety and improve psychological calm (Hidayati et al., 2023). For patients with more complex psychological burdens, cognitive behavioral therapy (CBT) can also be used to help identify and reconstruct negative thoughts associated with their eye disease (Supirno & Singkali, 2020). Through a holistic approach that integrates medical, psychological, and social aspects, patients with glaucoma and cataracts not only receive optimal physical care, but also deep emotional support so as to improve their overall quality of life.

### **Child and family counseling**

In the context of caring for children facing chronic conditions such as glaucoma or cataracts, the holistic approach is not only focused on the medical aspect, but also includes the psychosocial aspect through child and family counseling. This approach is important because chronic conditions in children can have a significant impact on their emotional well-being as well as overall family dynamics. One effective method of accompanying children is play therapy, which helps them express emotions freely and reduce anxiety during medical treatment. Research by Wardah et al. (2022) shows that play therapy is able to significantly reduce anxiety levels in preschool-aged children undergoing hospitalization, while creating a more positive atmosphere during the hospitalization process.

In addition to interventions for children, counseling also focuses on education to families as an important part of the child support system. Parents who understand their child's condition and their role in the treatment process will be better able to provide the emotional and practical support needed. Waiman et al. (2016) affirm the importance of family involvement in integrated sensory therapy for children with developmental disorders, as the active participation of parents can increase the success of therapy and reduce the emotional burden on children. Furthermore, the application of family therapy such as Brief Strategic Family Therapy (BSFT) has been proven to be effective in improving family communication patterns and reducing children's maladaptive behavior, as discussed in a study by Nursyanti (2018). Involving the entire family in this kind of therapy strengthens emotional connections and creates an environment that supports the child's recovery.

No less important is attention to the stress experienced by families, especially parents, in caring for children with special needs. Hardika and Widiawati (2021) highlight that the psychological burden on mothers of

children with disabilities is often high and at risk of causing mental health disorders. Therefore, stress management strategies and psychological support to families need to be an integral part of a holistic approach. Interventions can also be extended into the community context through group therapy. Manurung et al. (2023) report that group therapy is able to reduce negative attitudes in child and family relationships, as well as improve interpersonal communication. This community-based therapy provides a space for families to share experiences and support each other, strengthening a sense of community in the face of challenges.

Thus, child and family counseling is an essential holistic approach in accompanying children with chronic diseases. This approach emphasizes the importance of emotional support, education, and family empowerment to create a well-rounded care environment. When all family members are actively involved in the treatment process, better outcomes in the child's recovery and long-term well-being will be easier to achieve.

### **Dealing with anxiety and depression**

Anxiety and depression are two common mental health disorders in both children and adults, especially in the context of individuals facing chronic health conditions. Treating these two conditions requires a holistic approach that includes emotional, social, educational, and therapeutic aspects. Anxiety can progress from a normal stress reaction to a condition that interferes with daily functioning. Suputra et al. (2018) noted that as many as 42.1% of mothers who had children in the intensive care unit experienced anxiety, suggesting that the stress of the medical situation can worsen psychological conditions. On the other hand, depression, which is characterized by prolonged feelings of sadness, loss of interest, and sleep pattern disturbances, is also found in parents of children with serious diseases such as leukemia (Maulida et al., 2015). This emphasizes the importance of early detection and appropriate psychological intervention in the management of patients and their families.

Social support plays a big role in mitigating these psychological impacts. A study by Gusbet (2023) shows that support from peers and family is able to reduce emotional stress levels, including in medical personnel during the pandemic. This underscores the importance of building an environment full of empathy and caring, so that individuals experiencing anxiety and depression feel cared for and not isolated. In nursing practice, this approach needs to be complemented by appropriate therapeutic interventions. One method that has proven effective is cognitive behavioral therapy (CBT), which helps patients recognize and change the negative mindset that causes the disorder. In children, interventions such as play therapy can be used to help them express their feelings nonverbally and manage their emotions in a healthy way (Arjanto, 2022). Maula et al. (2023) also emphasize that a lack of social support can exacerbate depression in children with chronic diseases such as thalassaemia, so family involvement in therapy is an important component.

A holistic approach to dealing with anxiety and depression also includes the use of relaxation techniques such as meditation and mindfulness. This technique can increase self-awareness and reduce the tendency to destructive thoughts. Lubis and Abilowo (2021) proved that meditation practice is effective in lowering anxiety and depression levels in patients with heart failure, signaling the relevance of this method for a wide range of medical conditions. In addition, education about mental health is needed to increase public literacy about the symptoms and handling of psychological disorders. For example, in the educational environment, Yanti and Nurwulan (2021) identified a relationship between online learning and increased levels of stress and depression among students, which confirms the importance of preventive approaches through continuous mental education.

Thus, dealing with anxiety and depression requires a holistic approach that brings together elements of social support, psychological therapy, relaxation techniques, and education. This strategy not only improves the patient's quality of life, but also provides emotional strength for the family in accompanying the healing process. The success of interventions is largely determined by the synergy between health workers, patients, and families in building a supportive and sensitive environment for mental health.

### **Social Approach**

#### **A Holistic Approach: The Social Aspects of Dealing with Anxiety and Depression**

The social approach is one of the important elements within the framework of a holistic approach to nursing, especially in dealing with anxiety and depression in children with chronic illnesses and their families. A supportive social environment can have a profound impact on the emotional state of patients and families. Support from family, peers, and community has been shown to have a protective role against the development of severe psychological symptoms. Gusbet (2023) emphasized that social support from the surrounding environment can significantly reduce emotional stress, including those experienced by health workers during the pandemic. In the context of pediatric patients with chronic diseases such as thalassaemia, lack of social support is known to correlate positively with increased symptoms of anxiety and depression (Maula et al., 2023).

One of the real forms of social approaches is group counseling. Iswarindi and Widyan (2022) showed that group intervention was effectively able to reduce anxiety levels in parents of children with special needs.

Through this forum, individuals can share experiences, gain understanding, and feel social connectedness that eases their psychological burden. In addition, this approach also builds solidarity between individuals who experience similar difficulties.

However, technological developments also add complexity to the social approach. Social media, while it has the potential to expand support networks, can also be a source of anxiety and depression if used excessively. Budury et al. (2019) noted that the high intensity of social media use can have a negative impact on mental health, especially in adolescents and college students. Therefore, the use of social media must be accompanied by digital literacy education and the formation of healthy interpersonal relationships directly.

In terms of resilience, social support also has a significant impact. Mahendika and Sijabat (2023) stated that the existence of adequate social support can improve individuals' ability to rise from difficulties, form emotional resilience, and strengthen psychological well-being. This is important in the process of adapting to chronic diseases experienced by children and the psychological burden felt by their families. Mental health education that is carried out widely to the community, as proposed by Santoso (2020), also plays a role in shaping a social environment that is more responsive and empathetic to a person's psychological condition.

Thus, a social approach as part of a holistic intervention not only strengthens the psychological aspects of the patient and his family, but also creates a supportive social ecosystem in the long term. Through strengthening social relationships, group interventions, media literacy, and community education, this approach is one of the important pillars in efforts to overcome anxiety and depression as a whole.

### **Spiritual Approach**

Spiritual approaches to the treatment of anxiety and depression are important elements of a holistic model that is often overlooked in the practice of mental health interventions. This approach is not limited only to the religious aspect, but also includes the process of self-reflection, the search for the meaning of life, relationships with others and with higher powers. Spiritual intelligence can be a source of psychological strength that helps individuals cope with life's stresses and pressures. Fikriyyah et al. state that spiritual intelligence has a positive relationship with psychological well-being, especially when supported by a healthy social network (Shimizu et al., 2023). When individuals have high spiritual awareness as well as strong social support, they tend to be better able to deal with life's uncertainties without falling into a state of prolonged anxiety or depression.

Social support based on spiritual values also has a significant impact on creating a sense of connectedness between individuals. A community built on the basis of spiritual care can be a refuge for individuals who are experiencing psychological distress. Mutually supportive interpersonal relationships in spiritual communities can increase a sense of belonging and appreciation, which plays a big role in mental recovery. Groups such as spiritual communities, taklim assemblies, or charitable groups are clear examples of spiritual-based social support that helps reduce loneliness and isolation.

Spiritual activities such as meditation, prayer, dhikr, and self-reflection have also been shown to help individuals calm their minds and rediscover the meaning of their lives. Aulia et al. show that spiritual coaching activities, such as in scouting extracurricular activities, not only improve students' emotional intelligence, but also contribute to their general mental health (Aldhabaan et al., 2022). This activity encourages the development of empathy, gratitude, and concern for others, all of which have a positive impact on the management of anxiety and depression.

An educational environment that supports character development and spirituality is also an integral part of a holistic approach. Mardliyah et al. emphasize the need for character education that integrates spiritual values in learning, so that students can grow into intellectually, emotionally, and spiritually balanced individuals (Waudby et al., 2011). A curriculum that pays attention to moral and spiritual values not only forms a resilient person, but also creates a psychologically healthy school climate.

In addition, mental health awareness counseling and campaigns by integrating spiritual values can provide a new understanding to the community about the importance of a spiritual approach in maintaining psychological balance. The community has a role as an agent of change who is able to convey moral and spiritual messages, while educating the public about the prevalence of mental health disorders and how to manage them in a healthy way. This inclusive education not only increases awareness, but also strengthens social cohesion and solidarity between citizens.

Thus, a spiritual approach in the treatment of anxiety and depression plays an integral part of the holistic nursing care model. The development of spiritual intelligence, the strengthening of social networks based on religious and humanitarian values, and education that instills spiritual values are able to create more resilient individuals and communities. The integration of a spiritual approach in mental health ministry not only strengthens the individual internally, but also strengthens the social structures that support the long-term healing process.

### **Valuing the patient's values/beliefs**

A holistic approach in nursing does not only focus on the physical aspects of the patient, but encompasses the entire human dimension—biological, psychological, social, and spiritual. In children with chronic kidney failure (CKD), this approach is very important because the conditions experienced have a wide impact on the quality of life of children and their families, including the emergence of anxiety, depression, changes in body image, and increased spiritual needs.

One of the important dimensions of a holistic approach is the recognition and appreciation of the patient's spiritual values and beliefs. Spiritual and religious values are often a source of psychological strength for patients, children and families in dealing with chronic illnesses. Diego-Cordero et al. (2023) revealed that there is a positive correlation between spiritual approaches in treatment and improving quality of life and patients' ability to cope with illness. As many as 94.1% of patients consider it important to discuss spiritual beliefs in the treatment process, and 98.3% of healthcare professionals also agree on the importance of this in a clinical context.

In addition, spiritual intelligence is proven to play a vital role in improving the psychological well-being of individuals. Fikriyyah et al. (Shimizu et al., 2023) state that spiritual intelligence, when combined with adequate social support, can be a strong predictor of psychological well-being, especially in the face of anxiety and emotional distress. In the context of children with GGK, spiritual strengthening and social support such as patient parent groups or spiritual-based communities can help children and families more easily adapt to chronic disease conditions that last for a long time.

Spiritual activities such as joint prayer, meditation, or reflective activities can also be part of supportive therapy that accompanies medical treatment. Aulia et al. (Aldhabaan et al., 2022) highlight that fostering spiritual intelligence through extracurricular activities can even support children's mental health and build empathy and strong social connections.

For a holistic approach to be truly effective, health workers, especially nurses, need to be equipped with education and training that includes spiritual aspects. Yilmaz & Gürler (2014) emphasized that the nursing education curriculum should include an understanding of spiritual values so that nurses are able to provide care that is sensitive to the spiritual needs of patients. This is also reinforced by Sinclair et al. (2015), who stated that a deep understanding of spiritual aspects can strengthen psychosocial support, especially in palliative and terminal care.

A holistic, patient-centered approach should include open and empathetic communication, allowing patients and families to convey their hopes, values, and fears. Matos et al. (2024) emphasize that this kind of communication reinforces a sense of appreciation, maintains the dignity of the patient, and builds trust that is essential in therapeutic relationships.

Therefore, in the care of children with GGK, it is important to integrate a spiritual approach, respect the patient's and family's beliefs, and create an environment that supports their psychosocial well-being. Education to families about the importance of spiritual support, the involvement of religious leaders when needed, and mental-spiritual counseling are integral to holistic nursing interventions.

#### 1. Culturally appropriate spiritual support

Culturally tailored spiritual support to the patient is an important aspect of the provision of holistic healthcare. Various beliefs and spiritual values can influence the way patients cope with illness and interact with healthcare providers. Understanding and appreciating these values is essential to improving the patient experience and treatment outcomes.

#### 2. Sharia Hospital in Spiritual Health

A study by Nugrahini and Astutik shows the importance of spiritual services in sharia hospitals in improving the quality of spiritual life of patients. The study found that religious counseling, worship support, and a hospital environment that supports spiritual activities had a significant positive impact on the inner peace of Nugrahini & Astutik patients (2024). By creating an environment that supports religious and spiritual practices, hospitals can assist patients in gaining acceptance and peace of mind about their health conditions.

#### 3. Cultural Context in Nursing Near Death

Family involvement in the care of critical patients demonstrates the importance of spiritual and cultural support. Nasution and Hafifah stated that in Banjar culture, treatment before death involves not only medical measures but also emotional, cultural, and spiritual support from the patient's family (Nasution & Hafifah, 2022). The family plays a role in creating a comfortable atmosphere for patients who are nearing the end of their lives, including religious and cultural values that are very meaningful for patients to face death.

#### 4. Spiritual Counseling for Cancer Patients

Spiritual counseling also plays an important role in helping patients overcome the challenges faced during medical treatment, particularly in the case of cancer. In a study by Sitepu et al., it was found that spiritual counseling methods are effective in increasing the motivation of cancer patients to undergo chemotherapy

(Sitepu et al., 2019). This counseling helps patients connect with their religious and spiritual values, which can provide additional strength in the face of difficult treatment processes.

5. Implementation of Culture-Based Health Services

Tailoring healthcare to the patient's cultural and spiritual values improves patient satisfaction as well as the effectiveness of care. For example, research by Somana and Kukuh states that the use of Quranic murottal therapy can help reduce patients' anxiety before surgery (Somana & Kukuh, 2017). This approach suggests that spiritual practices relevant to the patient's culture can provide a calming effect and increase their readiness to undergo a medical procedure.

6. Education and Awareness

Education to healthcare workers about the importance of culturally appropriate spiritual support should be part of their training. Raising awareness of cultural differences and spiritual beliefs among patients can encourage more inclusive treatment solutions. This can be done through professional training that teaches healthcare workers to appreciate and respond effectively to patients' spiritual values.

### **Conclusion**

Chronic Kidney Failure (CKD) in children is a serious condition that affects various aspects of life, both physical, psychological, social, and spiritual. A case study of an 11-year-old A.D. patient showed that there are complications of GGK such as excess fluid volume, nutritional imbalances, impaired body image, and significant anxiety in children and their families. Through a holistic approach to nursing care based on SDKI, SIKI, and SLKI, focused and collaborative interventions can help improve patients' quality of life.

The approach involved fluid and diet monitoring, psychosocial support, education to the family, and spiritual and religious empowerment according to the patient's needs and family values. With optimal monitoring and family involvement, patients show better adaptation to their disease conditions.

### **Suggestion**

1. Improving Family Education: Families need to continue to be given a comprehensive understanding of CKD, including fluid management, nutrition, and the importance of regular controls.
2. Cross-Professional Collaboration: Cooperation between nurses, doctors, nutritionists, psychologists, and clergy is needed to ensure that care is comprehensive.
3. Psychospiritual Approach: Nurses should consider a psychospiritual approach to help children and families in accepting and managing chronic conditions more positively.
4. Periodic Monitoring: Periodic evaluation of outputs such as fluid balance and nutritional status is essential to determine the success of the intervention.

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