

# Coping strategies used by Parents of children with chronic kidney conditions: A Qualitative Study

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## Research Article

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## Abstract

**Background:** The chronic condition of children negatively affects them and their whole family, causing various psychosocial stresses. Meanwhile, parents use coping strategies to reduce these stresses and adapt to the child's health condition. Therefore, the present study aimed to explain the strategies employed by parents of children with chronic kidney conditions to cope with the child's condition.

**Methods:** This qualitative study was conducted in Shahid Motahari Hospital, Urmia, Iran. In this study a total of 22 parents of children with chronic kidney conditions were recruited using purposive sampling. Data were collected using semi-structured face-to-face interviews, and the concepts were then extracted using content analysis.

**Results:** The theme entitled "Striving for stability" was extracted from the results and consisted of two sub-themes of "Self-management" and "Situation management". The sub-theme of "Self-management" included concepts of "Seeking solace through inculcation" and "Taking refuge in spirituality" and the sub-theme of "Situation management" included concepts of "Striving to learn", "Determination to continue treatment", and "Striving to solve the problem".

**Conclusion:** Awareness of parents' experiences of caring for a child with a chronic kidney condition is of critical importance in meeting the unmet needs of children and their parents and can serve as a guide for other parents. This knowledge can also be important in designing community-based interventions, where parents play a key role in implementing and evaluating the intervention.

## Background

During recent decades, the number of children with chronic health conditions has increased significantly. (1). Among chronic health conditions, Chronic Kidney Conditions (CKCs) are often irreversible and progressive disorders with a prevalence rate of 7–12% worldwide (2). The chronic condition of children negatively affects them and their whole family, causing various psychosocial stresses (3). In addition to the role of typical parents, the parents of chronically ill children act as care coordinators, medical professionals, and a support system (4). Having a child with a chronic health condition can lead to higher parenteral responsibilities (5) and usually causes parents to suffer from psychosocial stresses (6–8). Most of the time, the parents of these children are exhausted, depressed, and anxious. High levels of stress can, in turn, lead to a negative impact on the child's health outcomes and medical treatment. Besides, it can be disabling for the parents as well (9).

To handle stressful and challenging situations of the family, maintain the whole family functioning and adapt to the new condition (10), parents use coping strategies (8, 11–13). Coping strategies are defined as a cognitive or behavioral response to stress that reduces the adverse effects of stress and creates a perceived adaptation (14). adaptation is a complex concept (15) and family adaptation has been a positive response to stressors using coping strategies (16) and It indicates the level of flexibility of the family in responding to stressors (17).

A previous study revealed that parents adopt a combination of the problem -focused, emotion-oriented, and avoidant coping strategies to cope with the chronic illness of their children (12). The type of coping strategies utilized by the family against stress is important to avoid negative outcomes for family. The professionals should discover the coping skills of parents of chronically ill children at an early phase (18).

Effective coping strategies are likely to help the family to deal with change positively, while families who do not use such strategies may experience negative adaptation (19).

Reviewing the literature indicated that parents' coping strategies can vary depending on the cultural context. Previous studies on coping strategies used by parents of children with CKC have been conducted mostly in other cultures such as Australia and America (20, 21). These studies suggest that the cultural context may influence the coping strategies that an individual chooses to deal with stress. Thus far, few studies have attempted to identify coping strategies among parents and families of children with CKCs in Iran. Concerning the above and the fact that a deep understanding of family coping strategies can help nurses to develop

supportive interventions tailored to the specific circumstances and needs of the patient's family (22). Therefore, this qualitative study aimed to explain the strategies employed by parents of children with CKCs to cope with the child's condition.

## Methods

### study design and setting

In this qualitative study, the researchers used conventional content analysis to explore parents' experiences and gain an in-depth understanding of the strategies used to adapt to the child's chronic health condition. The present study was conducted in Shahid Motehari Hospital, Urmia, Iran. This hospital is the only super-specialty center in West Azerbaijan Province, northwestern Iran.

### Participants

In this study, a total of 22 parents of hospitalized children with CKCs were recruited using purposive sampling. To select participants, the researcher first referred to the nephrology ward of the hospital and selected those parents who had the eligibility criteria. In this regard, the researcher had an informal face-to-face conversation about a subject to assess the parents' ability to express their experience. Then, the time and place of the interviews were decided according to their preferences. All interviews were conducted after visiting hours (after 4 p.m.) in a private and quiet room located in the nephrology ward. At that time, there was no visitor, and the doctors' visits and nursing care were usually over so that the parents were able to interview more calmly. None of the parents refused to participate in the study. Therefore, 22 parents (15 mothers and seven fathers) of 19 children with CKCs were selected to participate in the study. Inclusion criteria consisted of the followings: (a) willingness to participate in the study, (b) having the ability to express experiences, (c) having at least six months history of CKC in child, (d) not being a single parent, (e) having no mental health problem, and (f) The ability of parents to communicate with the local language. Unwilling to cooperate with the research team was considered the excluding criteria.

### Data Collection

Data were collected using semi-structured face-to-face interviews and field notes during one year (from September 2018 to September 2019). Moreover, data collection was conducted by one of the researchers who passed a 6- credits hours on qualitative research and had work experience in the pediatric nephrology ward of the hospital. Before the beginning of the interview, the researcher first talked to the participants about everyday issues for a few minutes to create an intimate atmosphere and make them feel comfortable expressing their experiences. After collecting the data on demographic characteristics, the interviewer started the interview with a general and open-ended question. The interview was then continued by asking probing and in-depth questions based on the participants' answers. The main interview question derived from a previous similar study (23). This interview question was "How did you deal with your child's illness?" The interviews also lasted for about 20–100 minutes, and the average duration was 33.7 minutes. A digital audio recorder was used to record each interview. Data collection continued until the data saturation stage, beyond which similar concepts and themes became conspicuous in the field notes (24).

### Data Analysis

Data analysis was conducted using the conventional content analysis approach proposed by Graneheim and Lundman (2004) (25). Therefore, data were analyzed based on the six following steps: 1) First, the interviews were recorded, transcribed, and then read several times to gain a general and correct understanding of them. 2) All interviews and observations were considered as units of analysis. 3) All words, sentences, or paragraphs were considered semantic units related in terms of content. 4) The semantic units were then conceptualized, abstracted, and encoded based on their concepts. 5) The codes were compared with each other in terms of their similarities and differences and then categorized into more abstract categories (sub- categories). 6) Finally, the main category of the study was determined by comparing the sub- categories with each other upon a deep and accurate reflection (25). The first author conducted the encoding, and the other authors were involved in the frequent review of coding. The research team conducted discussions until they reached a consensus on the encoding and categorization process. They also checked the findings with participants. Full documentation was done during the study, securing an audit trail. All methods were carried out in accordance with relevant guidelines and regulations of the Declaration of Helsinki.

### Rigor

Data rigor was assessed using Lincoln and Guba's (1982) criteria of dependability, credibility, confirmability, and transferability (26). Dependability and credibility were ensured through long-term engagement with data, peer reviews, and member-checking (respondent validation). To increase confirmability and transferability, it has been attempted to clearly describe each stage of the research process and not involve the researcher's assumptions in data collection and analysis as far as possible.

## **Results**

### **Demographic Characteristics**

In the present study, 22 parents (15 mothers and seven fathers) of children with CKCs participated, of whom 14 had two children, 4 had three children, and the rest had one child. Moreover, eight had primary education, six had lower secondary education, five had upper secondary education, and three had higher education. The mean age of the participants was 35.46 years, and the mean duration of the child's illness was 67.23 months. Among the children, one had Familial Mediterranean Fever (FMF), one had severe hydronephrosis caused by kidney stones, one had neurogenic bladder, three had chronic kidney disease (CKD), one had nephropathic cystinosis, and the rest had nephrotic syndrome (Table 1).

Table 1  
Demographic characteristics of participants

Parent's No.	Parent's Gender	Child's Gender	Education	Number of Child(ren) in the Family	Child's Age	Birth Order	Disease Duration	Diagnosis	Treatment
1	Female	Male	Primary	2	11 years	1	5 years	Renal failure secondary to FMF	Conservative treatment
2	Female	Male	Primary	2	7 years	2	7 years	Severe fetal hydronephrosis secondary to kidney stone	Surgery, conservative treatment
3	Male	Female	Lower Secondary	2	11 years	1	7 years	Nephrotic syndrome	Conservative treatment
4	Female	Male	Primary	1	14 years	1	7 years	Neurogenic bladder	Clean intermittent catheterization
5	Male*	Male	Upper Secondary	2	11 years	1	5 years	Renal failure secondary to FMF	
6	Female	Female	Lower Secondary	1	13 years	1	6 years	Nephrotic syndrome	conservative treatment
7	Male	Male	Higher	1	11 years	1	11 years	Chronic renal failure	Peritoneal dialysis, transplanted
8	Male	Female	Upper Secondary	2	10 years	1	7 years	Nephrotic syndrome	Peritoneal dialysis
9	Female	Male	Primary	3	11 years	3	9 years	Chronic renal failure	Peritoneal dialysis
10	Female	Male	Upper Secondary	2	9 years	1	7 years	Nephrotic syndrome	Conservative treatment
11	Female	Male	Primary	3	9 years	1	5 years	Nephrotic syndrome	Conservative treatment
12	Male**	Male	Lower Secondary	2	9 years	1	7 years	Nephrotic syndrome	
13	Female	Male	Upper Secondary	2	7 months	2	7 months	Renal failure secondary to cystinosis	Conservative treatment
14	Female	Female	Primary	2	4 years	1	2 years	Nephrotic syndrome	Conservative treatment
15	Female	Male	Upper Secondary	3	13 years	1	10 years	Nephrotic syndrome	Conservative treatment
16	Female	Male	Upper Secondary	1	7 years	1	3 years	Nephrotic syndrome	Conservative treatment
17	Female	Female	Lower Secondary	2	10 years	2	4 years	Nephrotic syndrome	Conservative treatment
18	Female	Male	Higher	2	8 years	2	2 years	Nephrotic syndrome	Conservative treatment
19	Female	Female	Lower Secondary	2	1.5 years	2	8 months	Nephrotic syndrome	Conservative treatment

Parent's No.	Parent's Gender	Child's Gender	Education	Number of Child(ren) in the Family	Child's Age	Birth Order	Disease Duration	Diagnosis	Treatment
20	Male	Female	Lower Secondary	3	8 years	3	4 years	Nephrotic syndrome	Conservative treatment
21	Female	Female	Primary	2	7 years	2	7 years	Chronic renal failure	Peritoneal dialysis, transplanted
22	Male***	Female	Primary	2	7 years	2	7 years	Chronic renal failure	

## Category: Striving for stability

A category entitled "Striving for stability" emerged as the result of data analysis. This category consisted of two sub-categories of "Self-management" and "Situation management" (Table 2).

Table 2  
Category, sub-categories, and primary concepts of the study

Main Category	Sub-categories	Primary concepts
Striving for stability	Self-management	Seeking solace through inculcation
		Taking refuge in spirituality
	Situation management	Striving to learn
		Determination to continue treatment
		Striving to solve the problem

## Sub- category: Self-management

One of the sub-categories extracted from the participants' experiences was "Self-management". These sub-categories included concepts of "Seeking solace through inculcation" and "Taking refuge in spirituality".

### Seeking solace through inculcation

Some of the parents attempted to keep their spirits up by taking measures such as comforting themselves, comparing, and underestimating the child's illness. One of the participants described his experience in this regard as follows:

*"Sometimes I told myself that well, it's just an illness and it does happen anyway. We'll fight it off coz the important point is that it's curable. This talking with oneself would cause one to feel so better and calmer." (P 18)*

One of the fathers also consoled himself with comparing his child's condition with the worse conditions of other children. He described his experience in this regard as follows:

*"While I was seated in the yard of the hospital, there was a man beside me who was laughing. I asked him 'what are you doing here?' He said that my daughter's undergoing chemotherapy and that's why I'm here. At the time, I was just thinking about why he's laughing and I'm upset, although the health condition of my child is better than his." (P 3)*

Underestimation of the child's illness was one of the measures taken by the parents to find solace. One of the mothers stated her experience in this regard as follows:

*"Well, there are two kidneys in the body. If one of them doesn't function properly, another one will be enough to satisfy the body needs. These days, many people agree to sell one of their kidneys." (P 2)*

## **Taking refuge in spirituality**

Based on the participants' experiences, faith and trust in God have calmed them down and improved their ability to deal with their problems. In this regard, one of the fathers expressed his experience as follows:

*"We both (my spouse and I) say prayers and saying prayer gives us a lot of energy." (P 12)*

The statements of one of the parents were as follows:

*"It is divine destiny. Maybe this is a kind of divine test. So, you should not say anything in God's wisdom." (P16)*

## **Sub-category: Situation management**

"Situation management" was another sub-category that emerged from the parents' experiences. This sub-category included concepts of "Striving to learn," "Determination to continue treatment," and "Striving to solve the problem."

### **Striving to learn**

One of the concepts extracted from the parents' experiences was striving to learn, which was emphasized by the majority of participants. Parents gradually realized that the best way to manage the child's condition is to raise awareness and acquire knowledge about it. Therefore, they attempted to use the available resources to obtain the necessary knowledge in this area. In this regard, one of the parents presented the following statements:

*"When doctors and other professionals come to our room to visit my child, I carefully listen to what they say about the tablets and serums administered to my child, by which I can obtain information about them." (P 18)*

Based on the participants' experiences, consulting with parents of children with CKCs and learning from their experiences was one of the most valuable and reliable sources of information for parents, so that the statements of one of the parents confirmed it. She expressed her experience in this regard as follows:

*"I try to talk a lot with people who have a child with kidney problems. I talk to them to know what they say. I gather information and material from their words. Then I quickly do those things that can positively affect my child's health status." (P 2)*

### **Determination to continue treatment**

Another strategy used by parents to manage the situation was the determination to continue treatment, for which they had taken different measures. This determination began from the pregnancy period, during which parents were informed about the child's illness. Despite the awareness of the child's illness during pregnancy and the suggestion for abortion, some of the parents continued to insist on giving birth, improving their child's health condition and tolerate the problems they faced in this way, regardless of the decisions of others. One of the mothers declared her experience in this area as follows:

*"The first time they informed me of my child's problem, I was deeply upset. My husband found a doctor without any consultation with me and wanted me to have an abortion. I left my husband because of my child." (P 2)*

Even after the child's birth, parents continued the treatment, regardless of the disturbing judgments of others. One of the parents described his experience in this regard as follows:

*"My brother said that 'What will happen if your son gets married?'. Well, these issues always come up and cause sadness. We don't pay attention to what people think or what they say or not say." (P 12)*

Parents also tried to use all their resources to achieve the ultimate goal, improving the child's condition. In this regard, one of the parents put her experience into the following words:

*"I said I'm so rich. I will take my son anywhere in the world to just lead him to get better." (P 15)*

Sometimes parents even were obliged to change the medical center to access a better doctor and continue the treatment process. In this respect, one of the mothers put her experience into the following words:

*"In the first year, his eyes were very swollen when he woke up. We took him to the hospital in our city. He/she was admitted there, but he didn't recover. Then we took him to Tabriz for visiting a better doctor, but he didn't get better there either. Subsequently, I took him to Tehran." (P 11)*

Another measure adopted by the parents was to adhere to continuous treatment and care. Since the parents were informed of the diagnosis of the child's disease, their most important goal was to improve the child's state of health. To achieve this goal, the parents understood the importance of continuous treatment and care and adhered to it. Below are the statements of one of the parents on this point:

*"I try very hard not to let my child eat salty foods, so that her/his body doesn't swell and the disease doesn't recur." (P 19)*

All parents constantly supervised the treatment and care process to ensure treatment adherence. In this regard, one of the parents stated her experience as follows:

*"I take care of my daughter in a way that she doesn't even catch a cold during this year. She doesn't have a fever, a runny nose, or a cough." (P 17)*

The statements of one of the mothers in this area were as follows:

*"Now that he is undergoing dialysis, I change her dressing every other day. The doctor said that her dressing should be changed frequently, so that the wound won't get too infected. I take great care of her. We assigned a room just for observing cleanliness." (P 21)*

## **Striving to solve the problem**

Another measure taken by parents to manage the situation was striving to solve the existing problems. Parents attempted to manage the situation by solving the problems they face. Through this way, they were able to manage the child's condition. Financial difficulty was one of the problems most parents faced, and they used different methods to overcome it. One of the mothers expressed her experience in this area as follows:

*"I had trouble affording medications for 2 years due to their high costs. Later I started working outside the home. That was the way I got insurance and I can afford the medications easier right now." (P 16)*

Sometimes parents tried to solve problems by moving their house. One of the parents made her remarks in this regard as follows:

*"One thing I did was moving (the house) closer to the school. So my son could come home during the recess and change his diaper." (P 17)*

Moreover, parents sometimes took steps to prevent possible future problems for the child. One of the parents put her experience into the following words:

*"My husband has now opened a bank account for our child. He says I'll deposit money in this account. I don't know whether he will recover or not. We won't stay with him always." (P 11)*

Most children became restless due to the painful medical procedures and limited mobility caused by the illness, which exacerbated parents' problems. In such situations, parents tried to comfort the child by taking necessary measures and get his/her cooperation in the implementation of medical procedures. One of these measures was to comfort the child. One of the parents, whose child needed to do Clean Intermittent Catheterization (CIC) every three hours, described his measure as follows:

*"When he was 4 or 5 years old, he would say, 'Mom, when will this catheterization finish? Do you always have to do this? I'm too weary of doing this again and again. What is this?' I told him to look at a boy who was in a wheelchair. Then I told him that you don't have any problem in comparison to this boy. It's just a catheter. He was calmed down with these words."(????)*

The statements of one of the participants in this regard were as follows:

*"When my daughter begins to play with other children, time passes by so quickly and runs out as the dialysis time strikes. I tell her that we gotta go for dialysis, but she doesn't come and cries. Then I tell her that you'll receive an organ transplant and after that, you'll recover and can play with other children. These words cause her to be happy." (P 22)*

## Discussion

To cope with the child's CKD, the parents used strategies categorized in the main category of "striving for stability." This category consisted of two sub-categories of "self-management" and "situation management." In this study, after experiencing a considerable diagnosis-related strain, parents strove to reach psychological stability and inner peace, by which they could take the necessary and appropriate measures and finally manage the current situation.

McCubbin et al. proposed an approach to coping in parents of chronically ill children. According to this approach, parents of these children show some particular behaviors to effectively resolve the psychological, emotional, and functional consequences of the child's illness and create a sense of control over its unpredictable, stressful and uncertain nature. Some of these coping behaviors include searching for information, communicating with similar families, sharing feelings with others, raising an independent sick child, getting closer to the spouse, saying prayers, exercising and having fun, strongly supporting family members, and gaining the support of social groups (27).

In this study, the participants took some measures to keep their stability and ability to meet the child's needs, reduce tension, find the necessary calmness, and ultimately manage the situation. These measures were classified under the sub-category of "self-management." "Seeking solace through inculcation" was one of the concepts of this sub-category. In the present study, comforting oneself, comparing, and underestimating the child's illness were the most important parental coping strategies to find solace. In a study by Sikorová and Polochová, it was found that parents of chronically ill children often tackle the problems through coping strategies, such as redefining a stressful event as an internally controllable event (28). Allahbakhshian et al., showed underestimating the disease to be one of the parental coping strategies used after angioplasty (29). Nicholas showed that fathers of children with chronic kidney disease used positive thinking and charge-taking to cope with the child's condition (30). Hodges and Dibb extracted two main themes of "Social comparison" and "Support" from the experiences of parents of children with Duchenne Muscular Dystrophy (DMD) (31). In this study, two types of comparisons were made by parents. Some parents compared themselves to those parents who had coped well with the child's condition, and this kind of comparison encouraged a positive outlook among them. In contrast, some parents compared themselves to those in a worse situation, which made them thankful for their situation. The results of the above studies are consistent with the results of our research. All the results indicate that despite many problems and worries, parents tried to control their emotions using effective solutions, to show proper performance and cope with the existing conditions with a relaxed mind. Therefore, health care providers can play an important role in improving parental adaptation to the child's health condition by using parents' experiences in this regard.

Taking refuge in spirituality was another strategy suggested by almost all parents. By seeking God's help, parents overcome the anxiety and depression caused by their child's condition. Similar findings have also been reported in the literature review on chronic conditions. In studies by Abdoljabbari et al., Alsharaydeh et al., Cutillo et al., and Gona et al., parents of chronically ill children used the strategy of taking refuge to spirituality to cope with their child's condition (7, 32–34). In a study by Salvador et al., faith in God was considered as one of the parental strategies used in caring for chronically ill children (8). The results of the above studies are also consistent with the results of our study so that they indicated that in the process of coping with the child's chronic condition, religious beliefs have paved the way for many parents and created a sense of hope, motivation, positive thinking, and emotional support in parents. These findings emphasize that health workers should consider the spiritual needs and religious beliefs of parents in order to provide holistic and comprehensive care. Moreover, medical professionals can facilitate the process of parental adaptation to the child's condition along with avoiding giving parents false hope and focusing on the reality of the disease.

Situation management was another sub-category of this study. After achieving solace, participants sought to acquire the necessary ability to manage the existing situation and used several strategies to achieve this goal. One of the strategies used by

parents to improve the ability to properly care for their children was striving to learn. Seeking and acquiring knowledge about the child's condition was an important step in the process of coping with the child's chronic condition, since family caregivers' information needs are met, and this will increase their knowledge about the disease etiology and prognosis as well as their awareness of their responsibility in the current situation (13). In studies by Gheibzadeh et al. and Marokakis et al., seeking knowledge was found to be one of the strategies used by parents of chronically ill children (12, 35). Parker et al. indicated that parents of children with chronic anterior uveitis expressed a desire to talk to parents of other children with uveitis, thereby feeling less isolated and reporting practical advantages such as sharing tips on effective strategies for disease management (36). The results of the above studies are also in line with the results of our research so that they revealed that parents attempted to manage the situation by acquiring accurate and comprehensive information from reliable sources. Therefore, given that parents need the information to balance child care needs, health care providers have to provide the necessary education for parents and adopt an appropriate educational strategy to empower parents to care for the child.

In the present study, participants referred to another strategy called determination to continue treatment. Despite all the frustrations and problems, making a firm decision to treat the child and using all the facilities in this way were the measures taken by parents. To achieve this goal, sometimes parents were obliged to change the medical center. Furthermore, there is a limited number of studies in this area. In a study by Farsi et al., willpower was shown to be one of the coping strategies used by patients with leukemia undergoing hematopoietic stem cell transplantation in all stages of adaptation to the disease (37). Nicholas also revealed that fathers of children with chronic kidney disease utilized strategies of charge-taking and perseverance to cope with the child's illness (30). Other strategies were such that participants tried to follow the recommended diet and treatment regimens, adhere to health-promoting behaviors, and constantly supervise the treatment and care process, leading them to manage the situation. Gona et al. indicated that coping strategies applied by parents of children with autism are made up of problem-oriented aspects, including diet and care management (7). In a study by Jones et al., parents of children with chronic respiratory disease considered a sense of responsibility for continuous care and adherence to a treatment regimen as the causes of self-efficacy in managing the child's condition (38). In the study by Salvador et al., one of the family strategies in caring for a chronically ill child was study and care (8).

Sometimes parents put efforts into managing the situation by solving the problem in different ways. The most common problem mentioned by the majority of parents was financial difficulties. Overall, parents used cost management strategies in the face of the financial crisis, including saving money, borrowing money from others, seeking the support of supporting organizations, and working outside the home. Another parental strategy to punctually care for a child was to move house closer to the school. Planning for the child's future was another strategy used by parents to solve possible future problems. Employing these strategies led them to effective and successful coping. It should also be noted that there is a limited number of studies in this area. In the study by Salvador et al., one of the family strategies to care for a chronically ill child was to adapt to the physical area of the home (seeking a job close to the residence) and search for resources in the social support network (8). In studies by Easterlin et al. and Gheibzadeh et al., one of the strategies used by parents of children with chronic conditions was seeking social support (12, 39). In a study by Fathiazar et al., planning for the future was one of the strategies used by mothers of children with hearing loss (40). Comforting the child was another strategy used by parents in this study. Hildenbrand et al. showed that parents of children with sickle cell disease used coping strategies to help children adapt to the disease, such as encouraging distraction, increasing social support, facilitating the expression of emotions, and promoting acceptance (41). Proper education and support for health care providers can assist families to improve their skills in helping the child cope with his/her condition. The results of this study can provide a framework for clinical nursing interventions in the process of caring for chronically ill children and their families. Moreover, awareness of the coping behaviors used by parents makes it possible for health care providers to design intervention programs to support them appropriately.

## Conclusion

Based on this study's findings, it was concluded that parents of children with CKCs encounter many emotional, social, and financial problems and employ particular coping strategies to overcome them. Awareness of parents' experiences in caring for a child with CKC is crucial in meeting the unmet needs of children and their parents. This awareness can also serve as a guide for other parents who are dealing with similar situations. Medical professionals can also help manage stressful situations by getting

informed of effective coping strategies and providing useful information for parents of chronically ill children. This knowledge can also be important in designing community-based interventions, where parents play a key role in implementing and evaluating the intervention. The differences (how parents trying to solve the problem) and similarities (using spirituality as one of the coping strategies used by parents) between our country with other cultures, were also revealed in this study.

## Limitations

This research has some limitations. This research was the first qualitative study carried out by the first researcher. Hence, the researcher was guided by his supervisor. By the way, the number of fathers who joined the study was less than the number of mothers. It is because mothers have a notable role in caring for the child, and also fathers are too occupied to stay with the child in the hospital. The authors recommend that interventional studies be designed and conducted based on this research findings. The results can also be used to assist parents to adapt to their child's chronic illness more easily. The role of siblings was not examined in this study. Therefore, the authors suggest the role of siblings and their influence on parent adaption to be investigated in future researches.

## Abbreviation

Chronic Kidney Conditions (CKCs); Familial Mediterranean Fever (FMF); Chronic Kidney Disease (CKD); Clean Intermittent Catheterization (CIC); Duchenne Muscular Dystrophy (DMD).

## Declarations

**Ethics approval and consent to participate:** The study protocol was approved by the Research Ethics Committee of Urmia University of Medical Sciences (Ethics No. IR.UMSU.REC.1397.138). Prior to the beginning of the study, all participants were informed that they were free to withdraw from the study anytime because this was a voluntary study. They were also briefed on the study objectives and assured of the confidentiality of all personal data. Furthermore, written informed consent was obtained from all participants before they participated in the study.

**Consent for publication:** Participants signed written informed consent concerning publishing their data.

**Availability of data and materials:** The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

**Competing interests:** The authors declare that they have no competing interests

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**Authors' contributions:** All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by F KH, N P, M HM and A F. The first draft of the manuscript was written by F K and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript

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