

COPING SKILLS OF IRANIAN FAMILY CAREGIVERS' IN CARETAKING OF PATIENTS UNDERGOING HAEMODIALYSIS: A QUALITATIVE STUDY

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SUMMARY

Background: Coping skills enable caregivers to establish and maintain supportive relationships with the haemodialysis patients they care for. These skills are very important in terms of social support, promotion of mental health and social and family relations. The aim of this study is to investigate the coping skills of Iranian family caregivers as they take care of patients undergoing haemodialysis.

Methods: Twenty participants were selected for the study through purposive sampling. The data gathering techniques used for the research were in-depth and unstructured interviews. The researchers used an inductive thematic analysis approach to analyse the data generated from the interviews.

Results: Four main themes emerged from the data: help-seeking skills, self-nurturing skills, time management skills and stress management skills.

Conclusion: The focus of attention was on the stress management coping skills of the caregivers of haemodialysis patients together with their ability to cope with complex problems. Healthcare providers, by taking into account these skills and strategies of empowerment, can help other caregivers of haemodialysis patients cope with their heavy care conditions and better define their purposes in caretaking.

KEY WORDS Caregivers • Coping skills • Haemodialysis • Qualitative

INTRODUCTION

Worldwide, over 1.5 million individuals are living on haemodialysis, and this is projected to double in the next decade. In Iran, the incidence of chronic kidney disease (CKD) has been growing, while the number of patients receiving the services of haemodialysis centres is estimated to be 11,000 with an increase of 12% per year. In Iran, the mean age of people undergoing

various treatments for kidney disease is reported to be 52.8 years, which is lower than the global mean (Eslami *et al.* 2014).

Living with CKD can be worrying, restrictive and stressful for both patients and caregivers (Urden *et al.* 2006). Supporting chronic disease sufferers can be a heavy burden on caregivers, and any changes in the lives of the CKD patients

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will cause changes in the lives of caregivers who live in the same psychosocial atmosphere (Pressler *et al.* 2009; Chang *et al.* 2010). The caregivers of haemodialysis patients spend a great deal of time taking care of these patients, experiencing significant fatigue and care burden. This increases their stress levels and can result in the development of tension between patients and caregivers (Rabiei *et al.* 2015).

The family caregivers of haemodialysis patients are critical agents both in managing the disease and in promoting the patient's quality of life. However, many caregivers feel frustrated due to the high levels of stress they experience. This results from the wide demands of the care they are required to give the patient, their anxiety about the patient's condition, their uncertainties about the future and their concerns about specific problems. The caregivers of haemodialysis patients are constantly under pressure, and they can experience conflict and other problems because of the range of challenges they face, often resulting in harm to themselves and, ultimately, conflict with the patient (Chang *et al.* 2010; Gillanders *et al.* 2008).

When faced by such heavy care requirements, the coping skills of caregivers comprise the most important component of efficacious care. Coping skills are those abilities that increase the adaptability and positive and efficient behaviour of individuals as they assume responsibility for their own social role, and manage and deal efficiently with the daily challenges of life. For a caregiver, this includes not physical or mental violence oneself or one's patient. Monat *et al.* suggest that adaptability involves the ability to act in such a manner as to prevent or reduce the pressure brought about by life-related difficulties (Monat *et al.* 2007).

The family caregivers of patients with chronic diseases are required to adapt continuously to variations in circumstances if they are to care for the patient and themselves. To achieve this, different types of coping behaviours and responses are required. Avril-Sephula *et al.* (2014) argue that managing emotions and making life changes are two aspects of the coping process required of partners living with those undergoing haemodialysis. They also believe that the psychological and emotional support of partners is important in enabling the patients to manage the challenges they face (Avril-Sephula *et al.* 2014).

Tong *et al.* (2008) ascertain that family and friends play a crucial role in the management of the long-term challenges that arise throughout the course of CKD. This is despite the fact that these informal caregivers experience stress, depression, lack of confidence and poor quality of life (Tong *et al.* 2008). There is, therefore, a need for exploratory research and evidence to describe how it is that the caregivers of renal patients do cope.

Brunner *et al.* recommend that caregivers should learn life management skills to help both themselves and the other family members of chronic disease patients to benefit from healthcare providers' educative and supportive programs, as these can assist with adaptability (Brunner *et al.* 2010). Coping responses are a function of the combined use of various resources such as economic, cultural and personality factors.

Knight & Sayegh (2009) suggest that coping skills should be investigated within various contexts. Exploring and describing the coping skills, with their related beliefs and experiences, among the caregivers of chronic disease patients is, therefore, an important issue. Identification of these experiences could enable the healthcare system to develop operational strategies for understanding and supporting caregivers better (Knight & Sayegh 2009).

AIM OF THE STUDY

The aim of this qualitative study was to bridge the gap in the body of knowledge concerning caregiver coping skills, by exploring the perspective of family members who are caregivers for people undergoing haemodialysis and to comprehensively understand their coping skills through an investigation of their lived experience. The findings of this study will provide renal nurses with an understanding of how caregivers cope, and will also enable them to plan and implement strategies, within a caring atmosphere, that will help caregivers cope with their daily challenges.

MATERIALS AND METHODS

STUDY DESIGN

For this study, a descriptive-exploratory design was adopted. This is frequently used in qualitative research, particularly when very little is known about the phenomenon of interest (Masoudi *et al.* 2015). Unstructured interviews, supported by field-notes, were used to discover the participants' perceptions and experiences in relation to family caregivers' needs and solutions.

PARTICIPANTS

This study was derived from a larger study conducted between January 2014 and April 2015 in the four educational healthcare centres of the Isfahan University of Medical Sciences, Isfahan, Iran. Twenty family caregivers were chosen by purposive sampling.

A caregiver is defined in the present study as a family member who provides physical help and support to the patient and takes some responsibility for ensuring the patient's concordance with the dietary instructions, pharmacological prescriptions and the dialysis routine.

Purposive sampling selected 20 caregivers from the haemodialysis units of the four educational healthcare centres of the Isfahan University of Medical Sciences in Iran (Alzahra: nine caregivers; Noor-AliAsghar: four; Sadoughi: three; and Gharazi: four). The intention in selecting this sample was to obtain a comprehensive range of views from caregivers who had varying relationships with the patients.

The inclusion criteria were: being a family member and the main caregiver, having spent at least six months caring for the haemodialysis patient, being able to communicate in Persian, having no other patient in the family needing care and providing written consent to participate in the study.

DATA GATHERING

The interviews were conducted in Persian. Initially, the interviews were unstructured. Unstructured interviewing is a flexible technique that allows the researcher to explore the meaning in greater depth than is possible with semi-structured or structured interviewing. Because very little is known regarding the coping skills of Iranian haemodialysis patients' family caregivers, the unstructured interview was considered the best fit for the study design; for the same reason a descriptive-exploratory design was adopted. The interview started with the question 'Will you please describe your experience of caring for your patient?' All interviews lasted for 45–100 minutes and were recorded with the participant's consent.

DATA ANALYSIS

The data were gathered through face-to-face interviews (Birks 2011; Masoudi *et al.* 2015). A thematic analysis approach was adopted to identify the patterns emerging from the texts (Kazemi *et al.* 2011; Masoudi *et al.* 2015). First,

the interviews were written down verbatim, and then reviewed several times closely so that data immersion could be assured. The texts were examined several times for differences and similarities, and a list of codes was developed. Eventually, after all interviews were completed, the list of codes was merged into themes, and the analysis continued until there were no concepts left unidentified and the categories were coherent and meaningful.

RIGOR OF RESEARCH

In this study, for accuracy, the data were collected from two sources (interviews and field-note taking). The transcripts and field-notes were read repeatedly by the researcher so that an in-depth understanding of the data was obtained. To increase coding validity, all interview transcripts and lists of codes and themes were revisited and encoded by the researcher's colleagues and then compared with the initial coding. Any inconsistencies were then discussed and necessary corrections made. In addition, the initial coding of each interview was returned to the relevant participant so that its accuracy could be confirmed and the codes validated. A few codes, which in the opinion of the participants failed to express their viewpoint, were revised. Moreover, diversity in sampling was ensured by drawing participants from the four educational healthcare centres of the Isfahan University of Medical Sciences.

ETHICAL CONSIDERATIONS

Ethical approval was obtained from the Research and Technology Deputy of the Isfahan University of Medical Sciences (ethics code: 393792). The participants were informed of the purposes of the research and then gave their written consent to participate in the study. In addition, the participants were told that participation was voluntary and they could withdraw from the study at any time. With the participants' consent, a room near the haemodialysis ward was determined as the interview location, and during the interview, they had a satisfactory level of privacy and quiet.

FINDINGS

Of the caregivers, 14 were female and 6 male, and their mean age was 45 years. Ten (47.15%) were married and the rest were single. Most were the spouse ($n = 8$) or daughter ($n = 6$) of the patient, and the majority were housewives. With regards to education, most had diploma-level education. The mean length of a caretaking day was nine hours.

Themes	Sub-categories
Help-seeking skills	Information gathering and continuous learning
	Attempt to make others understand the situation
	Seeking cooperation and assistance
Self-nurturing skills	Enduring interaction
	Adornment
	Recreation and spirit renewal
Skills in time management	Purposeful planning
Skills in stress management	Organisation and prioritisation
	Problem-focused coping
	Role Modelling

Table 1: Themes and sub-categories elicited from the data.

Four main themes and 10 sub-themes were generated from the interviews. Themes and sub-categories are presented in detail in Table 1.

One of the main themes derived from the coping skills of the caregivers of haemodialysis patients was *Help-seeking skills*, which consisted of three sub-themes:

INFORMATION GATHERING AND CONTINUOUS LEARNING

Caregivers talked of gathering information and of their continuous learning about the patients' care-related needs as a necessary and effective skill in achieving adaptability. In this way, they are able to manage and control the patient's condition more efficiently, and ultimately they realise their own adaptability through controlling their circumstances and resolving problems. One of the caregivers said:

"... Everyday I'm [searching] on the internet and in books to learn something new and to be able to overcome the problems rather than allow them to defeat me..." (Caregiver no. 13)

Another caregiver said:

"... If you don't ask something and look for help, you lose [control of] the work and run short of stamina. I always ask this and that [person] and add to my know-how about how to adopt a suitable strategy when necessary to control my father's condition..." (Caregiver no. 3)

ATTEMPTS TO MAKE OTHERS UNDERSTAND THE SITUATION

Caregivers always insisted that the patient's situation should be taken into account and that others (family members, relatives,

community) should know how to care for the patient and understand the specific care needs of the patient. A caregiver said:

"... I'm always trying to make others understand what I'm doing. This way they understand me better and my work proceeds better..." (Caregiver no. 1)

Another caregiver talked about his efforts to force others to understand his care-related position in the following terms:

"... In these times, if you don't shout, no one will come to help you. You should always say what you're doing so that others will come to help you. At home, in the family and in the community..." (Caregiver no. 14)

SEEKING COOPERATION AND ASSISTANCE

Another approach adopted by caregivers in coping with their specific challenges was seeking others' assistance both with caretaking and for advice. One of the caregivers said this:

"... By oneself it's not possible to do all things. I get help from all, my father himself, from family and even my close friends who come and help me..." (Caregiver no. 9)

Caregivers also sought assistance from the healthcare team and the Rare Diseases Foundation:

"... His doctor has given me his [phone] number so that when I need him I can call him, I expect also the ward nurses, and when I'm free I go to the Foundation and get advice and help from them..." (Caregiver no. 6)

SELF-NURTURING SKILLS

Other skills used by caregivers in achieving adaptability in caretaking were self-nurturing skills. Through these skills, they managed themselves and their own resources more efficiently while still dealing with the problems arising from the disease. This theme consisted of three sub-themes as follows:

ENDURING INTERACTIONS

The occasional incident of family conflict when caring for a patient suffering from a chronic disease, such as renal failure, was inevitable from the caregivers' perspective. The caregivers

coped with these conflicts by promoting their capacity for enduring interactions.

"... In the end we sometimes run short on stamina and get angry and argue with this and that one, but we try to be cool and take the short straw and somehow understand them..." (Caregiver no. 8)

Another caregiver considered his patient to benefit from mutual understanding and interaction-based caretaking and believed that temporary conflicts could be dealt with by an enduring interaction.

"... Many times we have argued about my wife's work, but I've tried to take the short straw and have assumed that others are right..." (Caregiver no. 4)

ADORNMENT

Another skill in self-nurturing was paying attention to the individual domain, namely adornment, by caregivers. Despite the burden of caring for a patient with a chronic disease, they never neglected themselves because paying attention to oneself, in the caregivers' opinion, led to more efficacious caretaking. A caregiver said:

"... Many times, when I'm tired and don't nurture myself (my nutrition or personal hygiene), I have no stamina to work for my mother. I've found that I should first nurture myself to have the energy to help my mother..." (Caregiver no. 6)

Another caregiver described his increase in ability after nurturing himself as follows:

"... My wife when sees when I'm not well, upset or impatient, then she also gets upset and thinks that perhaps something bad is about to happen. For this reason, I pay great attention to my appearance..." (Caregiver no. 17)

RECREATION AND SPIRIT RENEWAL

Caregivers were constantly seeking to renew their own spirit in order to manage the problems related to their patients, and for this reason they turned to recreation and programs of spirit renewal. A caregiver said:

"... Chronic disease is one of the worst things. If your patient, or my father, gets depressed, whether you want it or not, it affects you as well. I believe strongly in spirit renewal and vitality, and whenever I go for a walk or to the park I feel much better..." (Caregiver no. 1)

Another caregiver talked of a good spirit as a prerequisite for enjoying caring for a patient:

"... When your spirit is good, you enjoy working for your patient and don't get tired. Thus an important element of living with a chronic [disease] patient is spirit renewal..." (Caregiver no. 4)

SKILLS IN TIME MANAGEMENT

Another strategy was planning for efficient use of time. When a caregiver's time is mostly spent on caring for a patient, his/her whole life is affected. This theme consisted of two sub-themes as follows:

PURPOSEFUL PLANNING

Purposeful planning is a fundamental component that caregivers adopted in time management.

"... For some time I went ahead without planning till I found I couldn't cope and ran short of time and the shadows fell behind. But when I plan, everything goes according to plan and there is no pressure on me..." (Caregiver no. 14)

A caregiver considered management of the wide variety of disease-related problems as being subject to planning to ensure the efficient use of time:

"... When time isn't in your own hands, and my mother's condition and her problems are burdensome, if you're not ahead with your time, you'll definitely be harmed and won't be the man you used to be. For every moment of working with my mother I have a plan..." (Caregiver no. 11)

ORGANISATION AND PRIORITISATION

Another aspect of time management was raised as a special skill needed by the caregivers of haemodialysis patients to achieve adaptability: this was paying attention to organisation in caring for the patient. When organisation was combined with

prioritisation, accomplishment was more likely, and the caregivers exhibited better adaptability to the specific circumstances of caretaking.

"... In hard conditions of caretaking, both planning and prioritisation are important to me, that is, (to decide) which job is more important and valuable for my wife. In this way, the caring plan proceeds more comfortably and I'm more satisfied, as well ..." (Caregiver no. 9)

A caregiver saw time as a treasure of gold and the efficient use of time through organization to be a way of controlling the problems and accomplishing the goals:

"... His condition may get worse and time is gold for us. For this reason, I've written down all his requirements and planned and really coordinated all the jobs I do for him ..." (Caregiver no. 7)

SKILLS IN STRESS MANAGEMENT

An important skill in caretaking is to be able to control stress levels under the hard conditions of caring for patients. The caregivers used two efficient skills in meeting potentially overwhelming stresses, namely problem-focused coping and modelling.

PROBLEM-FOCUSED COPING

Caregivers adopt a variety of skills in dealing with the issues in their lives caused by caring for a haemodialysis patient. Most of the caregivers will focus on a problem and make an attempt to change or avoid it. Understanding the problem is often more important to the caregiver than solving it because the solution often lies in an understanding of the problem even more than in solving it.

"... I am engaged in my father's issues, but always digest the issues well, think about them and clarify and dissect each issue to select the best solution. For his depression, for his diet and for everything concerning my father I make a plan..." (Caregiver no. 16)

A caregiver perceived understanding a problem as better than solving it and said:

"... Many times I've thought about an issue for several days and come to understand it well before solving it. Understanding the issue has helped me very much, and

I will find the best solution to be somewhere around ..." (Caregiver no. 4)

ROLE MODELLING

A domain of stress management which was consistently addressed by caregivers was that of modelling. Role modelling of people who have achieved some success in dealing with problems is very helpful and helps caregivers to remain optimistic and energetic.

"... Whenever I went for my mother's haemodialysis, they were more engaged than me and when I talked with them I asked "God! Who are these [people] that are so strong?" I observed them, and we talked and I learned much from them ..." (Caregiver no. 8)

A caregiver described his experience as follows:

"... It is said that a real man is the man who is the mill's underlying rock in the midst of the universe. Many have travails much greater than these words [can tell]. They could not be described by words. They are as resistant as mountains [those in] wheelchairs, the blind and so on. But they don't lift a finger. I, as do others, resist giving any assistance I can to my father..." (Caregiver no. 7)

DISCUSSION

The present study has sought to discover and explain the coping skills of the family caregivers of patients undergoing haemodialysis in Iran's healthcare context. From this study, four general themes were derived, the first of which was help-seeking.

In the present study, one domain of help-seeking was information gathering and continuous learning. It should always be remembered that knowledge can end a caregiver's confusion and help him/her adapt to the disease conditions. Barnes *et al.* (2006) argue that when caregivers do not know how to act in a crisis, they develop anxiety and distress, but when they obtain the necessary information, they can be comfortably engaged in their caretaking. Hence, caregivers are always seeking for the information necessary to control their problems (Barnes *et al.* 2006).

As knowledge is enhanced, the caregiver's ability to assist the patient in returning to life is extended and unhelpful thoughts

and occasionally false perceptions of the illness are increasingly disregarded by the caregiver. Moreover, information gathering can be an efficacious strategy in realising adaptability because it leads to changes in knowledge, beliefs and attitudes (Cooper *et al.* 2003). In fact, one of the most significant and obvious issues regarding the caretaking of chronic disease patients is enjoying updated and efficient information.

Cukor *et al.* (2007) believe that caregivers have to spend a great deal of time in the haemodialysis ward and, therefore, their relationships with the renal nurses are likely to contribute greatly to a recognition of their status and level of adaptability (Cukor *et al.* 2007). Therefore, in the Iranian context, the CKD caregivers are constantly interacting with the renal nurses to ensure the healthcare staff recognise their position and to learn the necessary strategies from them. In this regard, the caregivers' need to cope with a heavy care burden makes them seek out others' assistance and cooperation, including that of renal nurses, family and relatives. Because caregivers are unable to meet all the demands alone, they seek the assistance and cooperation of others.

Self-nurturing skills form another domain of adaptability in the caregivers of haemodialysis patients. An enduring interaction is one strategy of self-nurturing. The caregiver's adaptability reflects his/her interaction with the patient and the patient's satisfaction with his/her performance of the caring role. This is also influenced by personality, history, culture and family expectations (Lillis *et al.* 2010).

According to Roy's Adaptation Model, an individual is constantly interacting with his/her dynamic and changing surrounding. Consequently, the individual is always changing and making attempt to achieve adaptability. From a nursing perspective, when an individual fails to achieve a satisfactory level of adaptability, he or she develops feelings of need for long-term attention and support (Fawcett & DeSanto-Madeya 2012). In addition, personal health beliefs, family structure, race and social status all contribute to the way people deal with life stressors such as caring for a haemodialysis patient (DeSanto-Madeya & Fawcett 2009). Despite being aware of the significance of these factors, to date studies have failed to adequately investigate the cultural variables influencing the problems and coping approaches with haemodialysis patients (Ramirez *et al.* 2012). Renal nurses are able to support these patients more appropriately when they have a greater understanding of how

it is to live with CKD and of the caregivers (Polaschek *et al.* 2009). At the same time, family conflicts can affect acceptance of the disease by the patient and interfere with his or her ability to adhere to the strict therapeutic regimen, necessitating alternative treatments (Cukor *et al.* 2007). This study was, therefore, conducted to discover and explain the interactive skills of caregivers so that the renal nurses can consider these in their planning.

Another self-nurturing skill in caring for patients is for the caregiver to pay attention to the adornment of his/herself. Receiving dialysis treatment is stressful, and this chronic stress can bring about several complex mental problems in the patients (Eslami *et al.* 2014), and this places a heavy psychological burden on the patients' caregivers. Regarding coping strategies, Gilba *et al.* believe that, for both caregiver and patient, a spirit of resilience leads to hopefulness, despite the limitations imposed by the disease (Gilbar *et al.* 2005). From the care experiences of the caregivers of haemodialysis patients in Iran, the issue of leisure and recreation was consistently addressed, such that if a caregiver neglected his/her spirit renewal, he/she would lose the stamina needed for caretaking.

One of the most fundamental skills in the adaptability needed for efficient caretaking is time management. Theofilou (2013) demonstrated that the caregivers of haemodialysis patients should always consider adaptability to the challenges of the disease as a process that ranges from crisis to self-control, and this is indeed at the core of the concept of adaptability (Theofilou 2013). It could be argued that self-control involves purposeful planning, and that caregivers are required to achieve a level of capability through purposeful planning so that they are able to control and manage the disease requirements.

Regarding caregivers' fear and anxiety as a threat to their adaptability, Barnes *et al.* (2006) explain that when caregivers do not know what to do in a crisis, they become anxious. Indeed, this could also be explained in relation to the variety of care tasks and the lack of expertise in controlling and managing disease-related problems (Barnes *et al.* 2006). Purposeful planning is thus an appropriate strategy adopted by both renal nurses and caregivers in overcoming fear and anxiety.

Organisation and prioritisation of care tasks are another domain of time management. Kidney disease and its therapeutic regimen requires adaptability and coping-related abilities in

both patients and caregivers to achieve and continue with many behavioural and lifestyle changes (Arenas *et al.* 2010; Dixon *et al.* 2014). Long-term disease causes tension and severe physical and psychosocial problems for caregivers. One reason for these tensions is the broad scope of the tasks and the demands of the patient care. Accordingly, kidney disease can jeopardise the adaptability and coping-related abilities of the patients' relatives and result in a variety of maladaptive behaviours (Quinan 2006; Hebert *et al.* 2009).

Another coping skill of caregivers is stress management, consisting of two sub-themes, problem-focused coping and modelling. For problem-focused coping, the caregivers sought to discover solutions to problems and to implement the most appropriate solution through analysis of the problem. Delamater (2006) considers adaptability to be a process throughout which the caregiver becomes actively engaged and utilises a variety of strategies (Delamater 2006). Through problem-focused coping, caregivers seek to change a patient's situation or behaviour and they develop new skills and responses. In this way, they make an attempt to respond appropriately to the patient's demands and provide the conditions conducive to adaptability through problem solving.

Another strategy of stress management used by caregivers is modelling. This strategy originated from Bandura's (2004) concept. According to this understanding, caregivers, when facing the challenge of their patients, are more influenced by peers who appear to be experiencing similar problems. Their peers are mainly other caregivers with whom they interact in the haemodialysis ward and who have realised a good level of adaptability in caring for patients with their own hard-to-treat diseases.

Kralik *et al.* (2004) argue that the individuals who take care of people who have chronic disease, model the exemplary people in this area constantly, both so that they can maintain their identity and also care for the patient with still greater dedication (Kralik *et al.* 2004). Relevantly, Bandura (2004) believed that adequacy, competence and capability in coping with life are the levels of self-efficacy needed for adaptability, so that the people who feel highly efficient can deal with conditions more effectively, and persevere and often function at a high level because they expect to overcome the obstacles (Bandura 2004).

To figure out and explain the experiences of patients' caregivers is valuable in terms of evidence-based planning, because

nursing and caretaking both involve thinking about and making appropriate responses to the experiences of the patient and also of his/her family (Rabiei *et al.* 2015).

LIMITATIONS OF THE STUDY

Since this study was exploratory and the participants were enrolled from public healthcare centres in Iran, the transferability of the findings requires further studies to be conducted in other types of healthcare centres. The present study is an exploratory investigation that collects helpful data, gains insights and from which more research questions can be developed. The data of this study also serve as an introduction to more rigorous research in this area, for example the design of empowerment plans and supportive and educative programmes.

IMPLICATIONS FOR PRACTICE

This study has provided important information to assist in developing strategies that will enable renal nurses and other healthcare providers to implement better supportive-educative programmes to address the needs of family caregivers to those who have kidney disease. It is important to provide support to family caregivers according to their coping behaviours and to promote an understanding of the complexity of the caring process in CKD.

As the CKD population in Iran grows, the management of CKD will require an on-going commitment not only from the patient, but also from the family caregivers. There is currently minimal information regarding the identification of certain aspects of family caregivers' coping strategies. A caregivers' appraisal, interpersonal relationship issues and social support all need to be considered for the family caregivers of people with CKD. Renal nurses can provide appropriate knowledge regarding kidney disease and its complications, indicating how to help and support family caregivers in coping with the disease complications in order to improve the outcomes of patient care.

CONCLUSION

Paying attention to and highlighting the coping skills of family caregivers and understanding their concerns are prerequisites for improving the quality of care and to result in patient satisfaction with the care provided. In other words, these are the fundamental elements of patient care that healthcare systems need to improve the quality of care.

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CONFLICT OF INTEREST

The authors of the present work declare no conflict of interest.

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AUTHOR CONTRIBUTIONS

LR: Conceived the study, helped with data analysis, managed study coordination, collected and analysed data and drafted the manuscript. AAE: was involved in critical revisions for important intellectual content and administrative/technical/material support, supervised the work, drafted the manuscript, approved the final manuscript. HAA: Conceived the study, helped with data analysis, was involved in critical revisions for important intellectual content and administrative/technical/material support, supervised the work, helped to draft the manuscript and approved the final manuscript. RM: Conceived the study, helped with data analysis, was involved in critical revisions for important intellectual content and administrative/technical/material support, supervised the work and drafted the manuscript. MSh: Conceived the study, helped with data analysis, was involved in critical revisions for important intellectual content and administrative/technical/material support and managed the study coordination.

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