Original Article

Family Caregiver's Perception of Resilience in Caring for Stroke Patients: A Qualitative Research

Abstract

Background: Resilience in stroke family caregivers is one of their most essential abilities to effectively adapt to complicated caregiving conditions. The present study was conducted to understand the family caregiver's perception of resilience in caring for stroke patients. **Materials and Methods:** This qualitative content analysis study was done in Besat Hospital of Hamadan, Iran in 2023. Participants were selected through purposive sampling, resulting in 22 face-to-face interviews with 15 caregivers. Data saturation was ensured by conducting additional interviews with three more participants. The interviews, lasting an average of 45 minutes, were conducted in the examination room of the hospital's neurology ward. Data analysis was carried out using the Granheim and Landman approach. MAXQDA 10 software was utilized for data management. **Results:** Following qualitative data analysis, 85 primary codes, 17 subcategories, and six overarching categories were identified: cognitive self-care, spiritual self-care, physical health, reinforcement of social relationships, seeking help from others, and meeting the patient's needs. Three main themes emerged: managing stress, adopting a healthy lifestyle, and addressing the patient's challenges. **Conclusions:** The study revealed that family caregivers of stroke patients perceive resilience through coping with stress, maintaining a healthy lifestyle, and addressing the patient's problems. These caregivers often struggle with the overwhelming responsibilities of caring for incapacitated patients, which can impact their resilience. The study's insights can be valuable for health policymakers and practitioners in improving training programs to support caregivers of chronic patients. To enrich the data, interviews were conducted with experts such as nurses, doctors, and family members of patients.

Keywords: *Family caregivers, qualitative, research, resilience, stroke*

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Introduction

Healthcare systems predominantly focus on treating and supporting patients during the acute stages of illness, which hinders the development of comprehensive long-term care plans that address the needs of caregivers of individuals with complex conditions such as stroke. Family caregivers are crucial in offering patients social, physical, and emotional support, but caregiving is a fluid and evolving responsibility. While it can sometimes be overwhelming, caregiving can also lead to personal growth and stronger relationships. Providing care involves adapting to the challenges presented by the illness.[1] Stroke patients suffer from physical disorders and disabilities caused by varying degrees of dependence on family caregivers.[7] The strain of illness and the demanding responsibilities placed on family caregivers often lead to disruptions in family dynamics. This, in turn, can impact the resilience of caregivers.[3,4] Caregiver resilience is the ability of family members to effectively navigate changes under challenging situations and regain their balance after a crisis.[5] It is a crucial human skill that enables individuals to adapt to challenging life circumstances and stress. Without this ability to adapt, patients and clients may struggle to accept and cope with their problems and disorders.[6] Nurses can help strengthen stroke patients and their caregivers' mental and psychological resilience through detailed care training and strategies. By enhancing coping mechanisms and increasing adaptability, nurses can better prepare caregivers for effective care and treatment.[2] Family caregivers facing challenges such as frequent transfers of patients for treatment are particularly at risk of experiencing gaps

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in care quality and continuity.[8] In addition, the costs of hospital care increase for these patients, and most of these costs are due to frequent avoidable hospitalization. Thus, new care approaches that overcome these challenges are needed.[9] Transitional care is a term used to describe the care provided to patients as they transition to a new care setting or change levels of care, such as moving from a hospital to a home. The goal is to ensure healthcare coordination and continuity across different locations.[10]

In various previous studies, such as the studies by Gilsenan *et al.* (2013), Fang *et al.* (2022), and Coşkun-Keniş *et al.*, caregivers with higher resilience experience lower levels of depression and stress.[11-13] During the last two decades, resilience has gained increasing attention in medicine because it is one of the indicators of mental health and has a special importance in mental health. Hatami states that resilience refers to people responding to risk differently.[14] Palacio defined this term as adaptation or successful coping against stressful life events.[15] Gonzales and colleagues consider resilience to be effective flexibility against life events and state that resilience is adapting appropriately while being exposed to stressful and dangerous environments and important threats.[16]

The burden of caring for stroke patients can have a negative impact on the physical and mental health of family caregivers. Previous studies have not explored the understanding of resilience among these caregivers, which is crucial for their ability to cope with challenges. We can enhance their caregiving skills by delving into their experiences and perceptions of resilience. The present study was conducted to understand the family caregiver's perception of resilience in caring for stroke patients.

Materials and Methods

Qualitative content analysis was conducted to qualitatively explain the participants' perceptions. Qualitative content analysis was done conventionally, and the Granheim and Landman method was used to analyze the data.[17] The field of study was the specialized neurology clinic of Besat Hospital in Hamadan, Iran in 2023.

The participants of the present study were among the family caregivers of stroke patients because they are in direct contact with patients and take care of their patients all day long. The study included 15 family caregivers who were selected through purposive sampling. To participate, caregivers had to meet certain criteria: 1. having at least primary education; 2. having age over 18 years; 3. having a family relationship with the patient (daughter, son, sister, brother, father, mother, and spouse); 4. being the main caregiver of the patient in the family (that is, at least 4 days to take care of him for at least 2 months per week and take care of the patient accurately and continuously); 5. no history of specific psychological illness, according to his statement, and the approval of the attending physician; 6. patients who have experienced a stroke for the first time have a moderate level of dependency according to the Barthel criteria (including the ability to speak); 7. patients should currently be hospitalized in the neurology department; 8. patients should not have a history of mental illness based on medical documentation; 9. patients should not receive home care from a nurse other than the family caregiver; 10. at least 2 months must have passed since the use of the tissue plasminogen activator and the acute phase of the stroke. Exclusion criteria were as follows: 1. any problem that leads to the termination of the person's participation at any time from the study (such as death or moving to another city); 2. Unwillingness to continue participating in the study.

To gather data and obtain accurate and trustworthy information, a semi-structured and detailed interview was carried out. The interview began with a broad and open-ended question (such as discussing their experiences with patient care or sharing their thoughts on resilience), followed by more specific questions based on their initial responses. These interviews took place in person in the examination room of the neurology ward at Besat Hospital in Hamadan, Iran. Some participants required a second interview; each session lasted approximately 45 minutes on average. The researcher collected field notes while present in the ward during various shifts. These notes were recorded promptly after completing interviews to ensure accuracy and detail. The content was reviewed multiple times before being transcribed word-for-word and analyzed promptly. The participants' consent was obtained to record the interviews. A total of 22 interviews were conducted with family caregivers over 6 months. After interviewing 12 participants, the data were reviewed for repetition. An additional three participants were included in the study to ensure saturation, but no new data emerged, indicating data saturation. The data was analyzed using the conventional content analysis method in this research. Content analysis is one of the qualitative methods used to classify words and phrases in the text. Content analysis is also one of the research methods used to systematically and objectively describe the content obtained from communication. In this research, data analysis was done using the Granheim and Landman approach. This method includes five steps: 1. writing each interview after conducting the interview; 2. reading the entire text to get a general understanding of the content; 3. determining meaning units and primary codes; 4. classifying similar primary codes in comprehensive classes; 5. determining the hidden content in the data.[17] In this study, the hand-written text was read multiple times immediately following the interview. The main codes were identified, integrated, and ultimately used to extract the underlying concept and content from the data.

To guarantee the accuracy and dependability of the data, Lincoln and Guba's four criteria of validity, verifiability, reliability, and transferability were employed.[18] During the study, the following were checked for the validity of the data: To validate the data, interviews, observations, and notes in the field and verification of the information obtained by the participants were done. Data reliability was checked through detailed and step-by-step implementation, data collection and analysis, and revision. Acceptability of the data was achieved by reviewing the manuscripts by the participants and using their additional comments, as well as the researcher's long-term engagement with the data. In addition, two expert professors in the field of qualitative research supervised and audited the entire research process. MAXQDA 10 software was used for data management.

Ethical considerations

To protect participant rights and comply with research ethics, we identified eligible participants, obtained permission from relevant officials through a letter of introduction, explained the research purpose and method, and secured oral informed consent and a letter of cooperation from each participant. In addition, the participants' freedom to not cooperate or withdraw from the study at any stage of the research and the confidentiality of the interview file and private information at all stages, were also emphasized. Furthermore, the study's objectives were explained to the participants, and written informed consent was obtained. Permission was also obtained to record the interview with audio devices. This study received approval from the ethics committee of the Hamadan University of Medical Sciences Research Council of Iran under the Code of Ethics IR.UMSHA.REC 1401/240.

Results

This section introduces the participants and presents the content analysis findings. The participants were 15 family caregivers of stroke patients (9 men and 6 women). Table 1 shows the participants' sociodemographic variables. Regarding age, the participants' mean (SD) age was 52.72 (7.61) years. After qualitative data analysis, 85 primary codes, 17 subcategories, seven categories, and three main themes emerged: "Dealing with stress," "Healthy lifestyle," and "Coping with patient problems." The theme of dealing with stress included the categories of cognitive self-care and spiritual self-care, the theme of healthy lifestyle included the category of physical health, and the theme of coping with patient problems included the categories of reinforcement of social relationships, asking for help from the others, and resolving the patient's needs. Table 2 shows examples of primary, subcategory, category, and theme codes obtained from the qualitative interview.

Theme 1: Dealing with stress

Family caregivers of stroke patients need cognitive self-care and spiritual self-care to deal with stress and fatigue to increase resilience and patience and deal with problems and stress. The content of dealing with stress is extracted from cognitive and spiritual self-care categories.

Cognitive self-care

Cognitive self-care in stroke patients aims to improve mood and feeling happy, which is in the form of learning its ways and is very useful for family caregivers. The cognitive self-care category is extracted from the two subcategories of avoiding negative thoughts and inculcating positive thoughts.

Avoiding negative thoughts

Emphasizing the importance of promoting cognitive self-care to enhance the resilience and well-being of family caregivers is crucial. Caregivers can benefit from activities such as reading books, listening to music, and focusing on their strengths to avoid negative thoughts. One of the family caregivers, a 39-year-old woman said: *"When I witnessed the suffering of my patients due to inadequate facilities and limited information, I initially felt hopeless. However, I made a conscious effort to shift my focus away from negative thoughts and towards improving*

Table 1: Demographic characteristics of family caregivers who participated in the study

Code	Gender	Age (year)	Income	Family relationship	Literacy	Number of care days	Interview time
1	Female	62	Medium	Wife	Diploma	5 days a week	50 minutes
2	Female	64	Low	Wife	Middle school	7 days a week	42 minutes
3	Male	60	Low	Husband	Illiterate	7 days a week	40 minutes
4	Female	39	Medium	Daughter	Diploma	4 days a week	45 minutes
5	Male	35	Medium	Son	License	5 days a week	42 minutes
6	Male	59	Medium	Husband	Diploma	7 days a week	40 minutes
7	Male	60	Low	Husband	Diploma	7 days a week	43 minutes
8	Female	36	Low	Daughter	License	5 days a week	41 minutes
9	Male	34	Medium	Son	Diploma	5 days a week	45 minutes
10	Female	63	Medium	Wife	Middle school	7 days a week	47 minutes
11	Male	61	Medium	Husband	Diploma	7 days a week	44 minutes
12	Male	40	Low	Son	License	4 days a week	39 minutes
13	Female	49	Low	Wife	License	7 days a week	45 minutes
14	Male	53	Medium	Husband	Diploma	5 days a week	49 minutes
15	Male	54	Low	Husband	Diploma	4 days a week	41 minutes

Table 2: An example of primary codes, subcategories, and categories of themes

Theme	Category	Subcategory	Primary Code
Deal with stress	Cognitive self-care	Avoid Negative Thoughts	1. Avoiding bad and negative thoughts like "my wife may not be well at all"
			2. Distraction and paying attention to another thing
			3. Removing pain and illness suggestion
			4. Writing negative thoughts on paper and finding a solution for it
		Suggestion Positive Thoughts	1. Controlling stress and overcoming worries with mental training and positive thinking
			2. Laughing in front of problems and solving daunting everyday problems
			3. Thinking about strengths
			4. Repeating positive sentences out loud
	Spiritual self-care	Improve Peace of Mind Methods	1. Bathing in hot water and relaxing in the bathroom
			2. Reading books with happy themes to provide happiness and peace
			3. Laughing from the bottom of your heart at least once every day
			4. Exercising like yoga to promote relaxation
		Applying Religious Beliefs	1. Participating in religious ceremonies
			2. The first number of reading time
			3. Praying and making vows and reading the Qur'an
			4. Listening to the Qur'an and matching it
		Energy Renewal	1. Resting between tasks to increase energy
			2. Doing simple household chores such as washing dishes to have energy
			3. Gradually doing heavy household chores such as tidying household items
			4. Going on a trip and taking a break from work
Healthy Lifestyle	Physical Health	Healthy Diet Following	1. Eating proper and boiled food
			2. Eating low-fat and low-species of food
			3. Reduce the consumption of sugar and fat
			4. Eating a lot of vegetables
		Physical Activity	1. To walk
			2. Aerobic exercise
			3. Morning exercise and aerobic exercise
			4. Going to the gym and doing endurance exercises
		Pain Self-Management	1. Avoiding crowded environments to reduce headaches
			2. Having a hot bath every day to reduce headaches
			3. Regular daily breaks to reduce back pain
			4. Not lifting a heavy object to deal with back pain
Coping with Patient's Problems	Reinforcement Social Relationships	Improve Communication Behaviors	1. Calling the family and asking about each other's condition
			2. Buying household necessities with friends
			3. Eating food together to increase communication
			4. Calling family members and asking how they are
		Appearing in the Community	1. Appearing in the community
			2. Monthly visits with friends and acquaintances
			3. Commuting with families
			4. Going for a walk with a girl and going to a restaurant
	Asking for Help from the Others	Division of Labors	1. Division of work to feed the patient
			2. Division of work for cleaning the patient, such as taking a bath and going to the toilet
			3. Division of work to prepare the patient's medicines
			4. Volunteering of household members to buy household necessities

Contd...

Table 2: Contd...

Theme	Category	Subcategory	Primary Code
		Receive Financial Aid	1. Getting financial help from people around 2. Provision of necessary equipment and necessary financial aid and loans 3. Borrowing money from neighbors 4. Taking a loan from welfare
		Receiving non-financial Assistance from Donors	1. Getting help from mosques to prepare food and necessities 2. Getting help from neighbors to buy medicine 3. Receiving financial and medical aid from sponsoring organizations 4. Using the help of organizations such as renting a wheelchair
		Asking Help from Others	1. Asking the girl for help in cooking 2. Helping boys and girls in housework 3. Asking for help from people around you in housework and shopping 4. Asking for help from the family to take the patient out
	Resolving the patient's needs	Safe Feeding to Patient	1. Giving the patient the right position and then feeding 2. Softening hard foods and then feeding them to the patient 3. Giving semi-solid food like rice milk 4. Feeding the patient slowly and resting between bites
		Helping with patient excretions	1. Taking the patient to the toilet with a wheelchair 2. Helping the patient and taking him to the bathroom 3. Being a support for the patient when going to the bathroom 4. Taking a tube for urine
		Safe Feeding to Patient	1. Provision of mobility aids 2. Preparation of a cane for the patient to walk 3. Obtaining the patient's rare medicines from reputable pharmacies 4. Provision of a wheelchair from a charity organization

the well-being of my patients. To achieve this, I immersed myself in psychology literature, watched uplifting TV shows, and listened to music to cultivate a positive mindset and boost my hope and motivation." (P 4).

Think positive

Having positive thoughts when practicing cognitive self-care in family caregivers is vital to advance the care of the patient and themselves. In this regard, caregivers mentioned things such as consulting with friends and seeking comfort, increasing hope for the improvement of the spouse, and thinking about the positive aspects of life. One of the family caregivers, a 60-year-old man, said: *"In order to cope with the challenges in my life, I realized the importance of fortifying my mental strength. I made a conscious effort to focus on positive thinking, acknowledging my capabilities to overcome obstacles and cultivating patience amid adversity. Seeking guidance from my friends also played a crucial role in boosting my optimism and resilience. Through their support, I was able to maintain a hopeful outlook and reflect on the brighter aspects of life, reminding myself that everything is transient. I am capable of navigating through life's ups and downs." (P 7).*

Spiritual self-care

In addition to cognitive self-care, spiritual self-care in family caregivers helps to strengthen their resilience. This category in family caregivers consists of three subcategories: methods of improving the sense of peace, applying religious beliefs, and rejuvenating.

Methods for improving peace of mind

Learning techniques to enhance mental peace can help strengthen the spirit. Family caregivers of stroke patients need to prioritize their mental and spiritual well-being by incorporating activities that promote peace. Caregivers have suggested various methods, such as indulging in a hot shower, relaxing, and engaging in hearty laughter. A 34-year-old male caregiver shared his experience, emphasizing the importance of maintaining peace for overall well-being: *"Seeing my father in weakness and illness state was difficult. He needed our help to do his daily tasks and daily needs and I was under a lot of pressure. I needed to prioritize my well-being by finding ways to stay calm and centered to care for him. I began incorporating hot showers, yoga, and relaxation exercises into my routine. I made it a point to laugh genuinely at least once daily and find moments of joy and fun. These practices helped me regain my sense of calm amidst the challenges of my father's illness." (P 9).*

Applying religious beliefs

Having religious beliefs and paying attention to spirituality in family caregivers is fundamental in increasing spiritual self-care and a sense of spirit and motivation. Having faith and religious beliefs can increase resilience and increase self-care skills. In this regard, some caregivers mentioned reading the Quran, giving thanks, and participating in religious ceremonies. A 63-year-old female family caregiver said in this regard: *"As I grappled with life's challenges, I questioned why my wife and I faced such hardships. I felt abandoned, wondering where God was in all of this. However, as I observed deeply spiritual people, I began to see the value of strengthening my spirituality. I realized that instead of blaming others and feeling ungrateful, I needed to seek solutions and trust in a higher power. I started participating in religious ceremonies, dedicating time to prayer and reflection. Through this journey, I learned to trust in God and cultivate a sense of gratitude, which ultimately transformed my perspective on life." (P 10).*

Energy renewal

It is one of family caregivers' most essential self-care items to improve resilience, have energy, and rejuvenate. In this regard, the caregivers mentioned things such as doing light work and then heavy work, doing work with a lot of patience, and doing priority work. One of the male family caregivers, who was 60 years old, said in this regard: *"When my wife got sick, I was very confused about how to meet her needs. My energy was depleted. I didn't know how to help with housework, clean my wife, help her walk, or do other things outside the house. In order to boost my resilience, I learned the importance of taking breaks between tasks. I prioritize lighter tasks first and approach them with patience to avoid exhaustion. Engaging in morning exercise, eating meals regularly, and getting adequate rest also contribute to maintaining my energy levels. Additionally, I prioritize my wife's tasks based on their importance, which helps me manage my energy more effectively and prevent burnout." (P 3).*

Theme 2: Healthy lifestyle

A healthy lifestyle following the care of stroke patients in family caregivers is essential in increasing resilience because if the body of caregivers is unhealthy, it is not possible to provide effective care. The content of a healthy lifestyle consists of physical health.

Physical health

To increase resilience in family caregivers, there are techniques through which one can achieve the highest level of physical health. This category comprises three subcategories: healthy eating, physical activity, and pain self-management.

Following a healthy diet

Following a healthy diet is one of the foundations of physical health. This principle is fundamental in family caregivers of a debilitating disease such as stroke. Some caregivers mentioned eating boiled food, consuming less salt, and drinking tea on time. A 40-year-old male family caregiver stated the following: *"Caring for a stroke patient was challenging, leading me to neglect my health. I coped with stress by drinking hot tea and cooking oily foods, resulting in high blood fat levels and skin issues. Realizing the impact of my diet on my well-being, I changed to eat boiled food, reduce fats, and avoid hot tea after meals. I noticed a positive shift in my energy levels and overall health by cutting back on salt and choosing healthier foods. As a result, my skin cleared up, and I felt more vibrant and healthy." (P 12).*

Physical activity

Having physical activity in people's daily lives removes boredom, futility, and fatigue caused by lack of work. A person may feel better with a simple walk than an inactive person. Some caregivers mentioned things such as taking deep breaths, relaxing, and going to the gym. A 39-year-old female family caregiver said: *"I used to feel extremely bored all the time. I often fell asleep when my dad went to work, forgetting that my mom was sick and needed my help. However, one day, when I walked with my friend, I felt alive and cheerful. I realized that incorporating daily walks, even just around my yard, taking a few laps, deep breathing exercises, warm showers, and short periods of relaxation could greatly improve my mood and energy levels; for example, I relax for 10 minutes and close my eyes, and then I get energized and do my work. That day became one of the best days of my life. I decided to join a gym and start doing aerobics, which completely changed my mood and made me feel strong." (P 4).*

Pain self-management

Due to physical fatigue and care burden in stroke patients, as well as self-care, the prevalence of pain such as headache, back pain, and leg pain is high in family caregivers. Some caregivers mentioned getting a suitable mattress to relieve back pain and lifting heavy objects with each other's help. A 64-year-old female family caregiver stated: *"Due to the overwhelming amount of household chores and caring for my wife, I experienced daily back pain and headaches that felt like my head was about to explode. The constant pain led me to rely on medication, which I grew tired of. After reading about alternative pain management techniques, I decided to make a plan. I started taking a warm shower daily, avoiding crowded places to stay calm, taking my headache medication as prescribed, and sticking to a consistent eating schedule. Gradually, my headaches subsided. I also invested in a supportive mattress for my back and enlisted the help of my children for heavy lifting. My back pain significantly improved by incorporating your recommended back stretching exercises." (P 3).*

Theme 3: Coping with patients' problems

Coping with the problems of stroke patients by family caregivers to increase the tolerance of the burden of the disease and the consequences of patient care is one of the most fundamental parts of this study and the most important component of family caregivers' understanding of the concept of resilience. The subject of coping with the patient's problems has been extracted from three categories: strengthening social relationships, seeking help from others, and meeting the needs of patients.

Reinforcing social relationships

Expectations and expectations of patients and family members of family caregivers, both during care in the hospital and to obtain the necessary preparations for care at home and receiving support, need to improve social relations skills and communication skills with others. Strengthening social relations consists of enhancing communication and appearing in the community.

Improving communication behaviors

To improve social communication, it is necessary and necessary to learn and acquire skills related to proper communication with the surrounding people to meet the needs of family caregivers and patients. In this regard, some caregivers mentioned such things as making hiking dates with friends, mountain climbing dates, and having periodic meetings. A 59-year-old male family caregiver stated: *"In my role as the primary caregiver for my patient, I found myself overwhelmed with responsibilities and unable to connect with those around me. I felt isolated and believed that no one could assist me. I withdrew from social interactions, avoiding communication with others. Over time, however, my circumstances improved significantly. I consciously tried to become more open and communicative, contacting my family and friends to check their well-being. I began reconnecting with loved ones, engaging in activities like hiking and mountain climbing with family members, and attending regular gatherings with friends. (P 6).*

Appearing in the community

One of the most important requirements for improving social relations is to be seen in society and to be among people so that information can be obtained from them and social ties can be strengthened. Some caregivers mentioned participating in ceremonies, attending parent-school meetings, and going out of the house with family members more often. One of the family caregivers of a 63-year-old woman said: *"I used to run away from the crowd and became a hermit. I was shy and didn't like to show myself because I thought I was broken because I took care of my wife too much, and it was not the same as before. Little by little, I tried to show myself more in society. I used to go out more with my family and friends. I often went out with my daughter and showed myself in society. I participated in events, became more active, and showed myself. Because I had to participate in society to get rid of my depression, and I was reclusive. I used to go to my daughter's school and participate in parents' meetings, and now I feel better about being in the community" (P 10).*

Asking for help from others

Helping the family caregivers of stroke patients, both financial and non-financial, is one of the most important elements of strengthening their resilience. The heavy burden of an exhausting disease such as a stroke can be unbearable for family members and causes caregivers to become frustrated. The class of seeking help from others was extracted from the four subclasses of working, receiving financial aid, receiving non-financial aid from benefactors, and asking for help from others.

Division of labor

Dividing tasks between family members to enjoy the strength of other members and gaining collective wisdom among family members can be a suitable solution to reduce the family's burden on the main caregiver so that this person can improve his abilities, tolerance, and adaptability. Caregivers had different opinions, such as dividing the work with the people around them, taking the patient to the bath at night with the help of the family's son, and preparing the necessary items each time by a family member. One of the female family caregivers, who is 64 years old, said: *"Due to my husband's condition, I found myself responsible for all the household chores including bathing, cooking, washing dishes, and other tasks. With my children at university in the morning and my son working at a shop, I was left alone to manage everything. Realizing I couldn't handle it all on my own, I began delegating tasks to those around me. My daughter took on the responsibility of feeding him, while my son helped with bathing and preparing things for my wife in the evenings. We established a system where each person would take turns assisting, making it more manageable. By dividing the work, we were able to make things easier and improve the situation" (P 2).*

Receiving financial aid

The financial need of stroke patients and their family caregivers to meet basic needs such as food, clothing, mobility aids, and many other things is one of the most vital needs that can be covered by getting help from related organizations and individuals. Family caregivers mentioned things such as going to welfare to get financial aid, going to charity organizations, and the Red Crescent to get a walker. One of the male family caregivers, who is 61 years old, said: *"I even had financial problems to buy my wife's basic medicines and supplements and food. I couldn't buy her a walker. My financial situation was very bad. When I went to a specialized clinic, I saw that one of the family caregivers of another stroke patient told me that There are many ways to be able to cover the expenses of my patient. Over time, I realized I must get help from far and wide. I went to welfare, and I am getting a subsidy for my patient now. I got a loan from charity organizations and a walker from the Red Crescent" (P 11).*

Receiving non-financial assistance from donors

Stroke patients' families rely on support from welfare, relief committees, and charities for essential daily needs like mobility equipment, clothing, and food. Caregivers mentioned getting medicines from the Red Crescent and renting wheelchairs from charities. A 40-year-old male family caregiver said: *"Obtaining my mother's medication was a challenge as I was unsure of where to find it and lacked the funds to purchase a wheelchair. I struggled to locate sanitary items like diapers, which were essential. By chance, I stumbled upon the Red Crescent and obtained the medicine. Through the charity, I could borrow a wheelchair and renew it monthly. This assistance greatly improved my situation and alleviated my confusion. Your program has been instrumental in my recovery." (P 12).*

Asking for help from others

Family caregivers need help from their neighbors and other family members to meet their needs and that of their patients. Without support from others, the main Üaregiver's well-being may suffer. Caregivers mentioned things such as asking friends for help shopping outside the home and asking relatives for help cooking. A 59-year-old male family caregiver expressed: *"Because my wife was paralyzed on one side of her body and my son and daughter were from two separate cities, I had to do all the work myself, and I was not able to make it at all. I was also working outside and had to earn my living expenses. I was helpless due to the burden of disease because I did not have enough money. I began seeking assistance from those around me, including my son and daughter, who visited our home and lent a hand. My friends were gracious in helping me with shopping, and my family assisted with cooking. Their kindness and guidance were invaluable in getting me through this challenging time." (P 6).*

Resolving the patient's needs

The most important task of the main family caregiver of a stroke patient is to meet the patient's needs and provide effective support and care for them because this group of patients has less independence in meeting their needs. Meeting the patient's needs consists of three sub-levels: feeding the patient correctly, helping to remove the patient, and providing health-sanitary facilities.

Safe feeding to the patient

The safe feeding of a stroke patient by a family caregiver accelerates their recovery process, and the caregivers mentioned things such as giving semi-solid food such as rice milk and thick soup and feeding in a sitting position. One of the male family caregivers, who is 60 years old, said: *"My wife was unable to sit up, so I had to feed her while she was lying down. Unfortunately, she kept coughing and almost choked at one point. I was unsure what foods would benefit her in this situation. The doctor recommended that she eat while sitting up, with assistance from two people. He suggested semi-solid foods like rice milk and thick soup. Following his advice, I fed her these foods, and she ate well and gradually became stronger. This guidance was incredibly helpful, and I am grateful for it." (P 3).*

Helping with patient excretions

Timely and convenient elimination of urine and feces of stroke patients makes them feel comfortable, reduces stress, and prevents excess digestive and kidney disorders for patients. Caregivers mentioned things such as drinking enough fluids, using the pelvis for defecation, and helping several people to defecate. A 39-year-old female family caregiver stated: *"Taking my mother to the bathroom was a frequent task due to her high water and fruit intake, making it difficult for me to have time alone. Sometimes, I yelled at her that I was tired and couldn't. She would wet her clothes, and I had to change the bedclothes under her every time forcefully. I realized later. I decided to put diapers on him and let him drink liquids whenever thirsty and not eat fast. He should also eat fruit once a day to keep his stomach soft. I bought him a basin, and to avoid changing diapers too quickly because it was expensive, he used to use the toilet there. We used to help a few people to take him to the bathroom, and we could control him, and your program was very useful for us" (P 4).*

Provision of health-sanitary facilities

Family caregivers need to provide the health necessities of stroke patients, including diapers for defecation, skin lubricants, cotton underwear, mouthwash, and other items to increase the level of health and improve the environmental conditions of patients. Caregivers also mentioned things such as preparing a toilet from medical equipment, taking a wheelchair to the bathroom, and transporting it with a wheelchair. A 63-year-old female family caregiver stated: *"One time, I attempted to assist my wife to the bathroom and realized she was having difficulty sitting down. It took multiple people to help carry her, causing strain and back pain for all. To alleviate this issue, I purchased a plastic toilet from a medical equipment supplier, which made urination and defecation much easier and more comfortable for her. Additionally, I rented a wheelchair from a clinic, which proved to be incredibly useful for transporting her around the house, outside for walks, and even getting her into the car. These self-care tools greatly improved our daily routines and made things much more manageable for us." (P 10).*

Discussion

The present study was conducted to understand the family caregiver's perception of resilience in caring for stroke patients. The findings showed that family caregivers of stroke patients have conflicting understandings of resilience. The three themes from the interviews with family caregivers included dealing with stress, a healthy lifestyle, and coping with the patient's problems.

Dealing with stress included the categories of cognitive self-care and spiritual self-care of family caregivers. Family caregivers of stroke patients must not only provide primary care for patients but also be able to adapt to the pressures caused by the burden of the disease and manage and control the conditions.[19] Accepting and adapting to the patient's condition, taking care of the patient in taking medicine, and creating a calm, positive, and constructive atmosphere are some of the main tasks that the families of the patients should pay attention to.[20] In addition to caregiving, mental burdens related to illness, family conflicts, financial problems, social isolation, and lack of social support are common experiences of families. These problems, along with a lack of education, skills, and resources, in addition to adverse effects on the mental health of caregivers, may unconsciously lead to the neglect of mental and emotional self-care.[21] The variety and severity of caring roles can lead to mental pressure in the family caregivers of patients, which, if left without treatment and intervention, will lead to a decrease in their cognitive health as hidden patients. Studies indicate that caregivers are often at risk of diseases such as depression and anxiety disorders, their life expectancy is 10 years less than normal people, and they have a reduced quality of life.[22] Among the most important problems these families face is the burden. The caregiver is often faced with pressures from the patient, which can lead to disruptions in family relationships, restrictions on social activities, work and leisure, financial difficulties, and physical ailments.[2] However, the mental burden is related to the emotional reactions of the caregivers toward the sick person, such as mental pressure, feelings of loss, and regret. About the problems of these families, studies have shown that some therapeutic interventions, including education, support, and proper care, can have a significant effect in reducing the psychological burden of family caregivers.[3] As a result, this improves the endurance of patients. In this regard, in a study, the burden of the family was measured in 150 families with patients suffering from chronic diseases, and the factors affecting it were investigated, during which the results showed: 1. Caregivers experienced the burden on an emotional and practical level. 2. There was a positive correlation between the amount of the patient's pathological behavior and the burden on the family. 3. Parents with heavier care-giving burdens, longer exposure to stressful environments, and greater economic participation required more comprehensive support.[6] The pressure caused by the burden of the disease on the family caregivers overshadows their resilience, and the caregiver has a conflict in managing stress, which, with cognitive and spiritual support, can improve their resilience as well as tolerance and adaptation to the disease.[7] In the study by Kontou *et al*., who conducted a review of 20 studies in England, the effect of cognitive training for families on the progress of treatment of patients with chronic disorders showed that training in the form of improving the mental and emotional conditions of families has been effective in the progress of treatment of patients with diseases. In addition, cognitive aspects, that is, increasing information and improving the level of awareness of families and correcting thoughts, beliefs, and wrong attitudes toward this category of people have been effective in the progress of their treatment.[33] In the research by Bani Ardalan conducted on 267 older people in Rafsanjan county of Iran, cognitive self-care training was implemented for 1 year in families with chronic patients, and the results were a significant reduction in the objective and mental burden of families, a decrease in the use of coercion and withdrawal as a coping strategy, and an increase in positive family relationships with the patient and social interests and relationships.[22] Regarding the effectiveness of emotional and psychological support of the family, in the study by Jafari and his colleagues, who conducted on 142 family caregivers in Tehran, Iran, after the educational program was implemented, there was a notable decrease in depression among patients with multiple sclerosis in the test group compared to the control group.[1] In addition, in the study by Kazemi and his colleagues conducted on 110 family caregivers in the Valiasr Hospital of Zanjan, Iran, caregiver burden and coping strategies were measured in caregivers of elderly patients with stroke. The results indicated mental and emotional complications in family caregivers.[5] In a qualitative study of the phenomenological type of Mahbobeh Shali *et al*.[27] in Tehran, Iran, it was shown that the 16 participants in the study benefited the most from family members and the environment to deal with stress. In dealing with stress, a person needs to be compatible with the environment and be in a constructive relationship with the people around him.

A healthy lifestyle includes the category of having physical health. Physical care in family caregivers of stroke patients is one of the most important points. Care is the process of taking care of activities and responsibilities; it not only includes meeting patients' physical needs but also requires emotional, social, and financial support.[8] Therefore, multiple and multidimensional functional disorders of stroke survivors require extensive and long-term care. This situation makes family caregivers vulnerable in the face of changes and the care needs of stroke survivors at home.[27] When caregivers perceive care needs as exceeding their abilities and resources, they experience stress that can negatively impact their physical and emotional health, work, and social life.[28] Caregivers of stroke survivors, compared to the general population and middle-aged and elderly people or caregivers of patients with neurological disorders, experience poorer physical performance. These symptoms persist for a long time and increase between 1 and 3 years after a stroke.[29] Many problems resulting from the long-term care of stroke survivors by family caregivers cause problems for caregivers, including not allocating enough time to strengthen the sense of tolerance and resilience, changes in body weight, sleep disorders, physical fatigue, and inability to concentrate.[11] All of them have a significant effect on the physical health of caregivers. Overall, unlike other health problems, stroke occurs suddenly, and survivors face long-term complications.[12] Stroke can affect family caregivers' physical health to different degrees by creating different challenges, such as changing the role, increasing time spent on care and treatment, increasing living expenses, decreasing income, and decreasing social activities.[23] The results of Kohestani and Baghcheghii's research on 90 caregivers in Arak, Iran indicated that caregivers of stroke survivors experienced burnout and physical, psychological, and social problems. Family caregivers suffer a lot of pressure as people are at risk of disease.[24] Another study has indicated that most caregivers of stroke survivors experience depression and reduced physical health.[25] It is thought that this complication occurs due to the reduction of social contact and not establishing proper communication with stroke survivors.[26] Due to the need for long-term care of survivors, family caregivers face problems such as not being sure of care needs, the heavy burden of responsibility, constant worry, and the feeling that the affected person is dependent on them for care; these issues lead to anxiety in caregivers.[29]

Coping with the patient's problems includes strengthening social relationships, asking for help from others, and resolving the patient's needs. Family caregivers should consider social relationships as a significant factor in increasing their resilience. In stroke patients, due to the imbalance between care needs and other caregiver duties, reactions are in the form of physical, mental, and social reactions. Imbalance is related to the social roles and personal, physical, emotional, and financial resources of the caregiver. Problems related to financial, family, and social expenses cause the family members, spouse, friends, and colleagues of the sick person to be under the influence of mental and physical pressure.[30] Fear of illness, its complications and death, feelings of helplessness, uncertainty about the future, anxiety, depression, anger, bereavement reaction, economic worries, and psychological tension in interpersonal relationships are among the tensions of social relationships.[31] Considering the increasing trend of stroke patients, the lack of facilities and space in the hospital for basic care of these patients, early discharge from the hospital is increasing for these patients; as a result, most of the time is spent caring for patients at home, and family members are responsible for taking care of the patients while they have limited education and resources in the field of the disease.[28] Therefore, the process of transferring care from the hospital to home care puts care pressure on the family and directly affects the caregivers' adaptation to the existing conditions. One of the reasons for the intense pressure of caring for family caregivers is probably their lack of awareness of how to care and how to communicate with the people around them to solve problems.[9] As long as the family caregivers do not have social relations, they will have problems in resolving the needs. The needs of the patients are difficult to resolve, and the person will be unable to get help from the organization and subordinates.[10] Based on this, it seems that resilience for caregivers of patients who are exposed to care burden is one of the possible mechanisms to resist adversity and mental disorders, which enables them to cope with the burden of care created as one of the stresses of life and to adapt to new situations and roles. In Wang *et al*.'s[29] research conducted on 110 caregivers in China, the level of resilience of caregivers of stroke patients was low. Fang *et al*.[12] conducted a study on 245 caregivers in China and reported low resilience of parents of children with cancer. According to the study by Keniş-Coşkun *et al*.[13] conducted on 141 caregivers in Turkey, the resilience of parents of children who were kept in a child rehabilitation center in Turkey was high. Bijnsdorp *et al*.,[32] in a qualitative study conducted on 17 caregivers in the Netherlands, showed that family caregivers who had balancing patient care with the need to earn a living Üreates a significant burden, making acceptance and Údaptation to patients' problems difficult. They could hardly cope with the two assigned tasks; in some cases, they even gave up and couldn't continue working. A key limitation was the lack of direct access to family caregivers and in-person interviews, hindering behavioral observation due to their demanding care-giving schedules; the lack of generalizability of study findings was another research limitation.

Conclusion

Dealing with stress, a healthy lifestyle, and coping with the patient's problems were extracted from resilience about the perception of family caregivers of stroke patients. The family caregivers of this category of patients gradually increase their resilience due to the incapacity of the patients and the exhausting nature of caring for them, the existence of ailments and a mountain of problems and follow-ups, and they become more flexible in the face of important care issues. They demonstrate thorough and patient care, enabling patients to complete their rehabilitation programs. Health personnel can design evidence-based, family-centered, and caregiver-centered programs by understanding family caregivers. Supporting family caregivers of stroke patients can foster resilience, patience, and a sense of control, promoting relaxation, spiritual growth, improved lifestyle, hope, motivation, and a positive attitude. Therefore, the issue of resilience in family caregivers of stroke patients is very important to increase the quality of patient care. This study emphasizes the importance of the resilience of family caregivers in exhausting illnesses and can provide health personnel with useful insights and understanding about family caregivers of stroke patients.

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Conflicts of interest

Nothing to declare.

References

1. Jafari M, Alipour F, Raheb Gh, Mardani M. Perceived stress and burden of care in elderly caregivers: The moderating role of resilience. Iran J Ageing 2022;17:62-75.
2. Navipour H. Care comprehensive assessment in home health care: Qualitative content analysis. Iran J Nurs Res 2022;16:23-32.
3. Kuriakose D, Xiao Z. Pathophysiology and treatment of stroke: Present status and future perspectives. Int J Mol Sci 2020;21:7609.
4. Gibbons EM, Thomson AN, de Noronha M, Joseph S. Are virtual reality technologies effective in improving lower limb outcomes for patients following stroke–A systematic review with meta-analysis. Top Stroke Rehabil 2016;23:440-57.
5. Kazemi A, Azimian J, Mafi M, Allen K-A, Motalebi SA. Caregiver burden and coping strategies in caregivers of older patients with stroke. BMC Psychol 2021;9:51.
6. Jaracz K, Grabowska-Fudala B, Kleka P, Tomczak M, Smelkowska A, Pawlicka A, *et al*. Development and psychometric properties of the caregiver burden scale in Polish caregivers of stroke patients. Psychol Res Behav Manag 2022;15:665-75.
7. Manzari ZS, Rafiei H, Ghaderi MS, Abedi F, Mafi MH. Relationship between resilience and caregiver burden among home caregivers of COVID-19 patients. Home Healthc Now 2023;41:42-8.
8. Mardanian Dehkordi L, Babashahi M, Irajpour A. Nonprofessional care in chronic critically ill patient: A qualitative study. Int J Prev Med 2016;7:125.
9. Nikbakht-Nasrabadi A, Mardanian-Dehkordi L, Taleghani F. Abandonment at the transition from hospital to home: Family caregivers' experiences. Ethiop J Health Sci 2021;31:525-32.
10. Nikbakht Nasrabadi A, Mardanian Dehkordi L, Taleghani F. Nurses' experiences of transitional care in multiple chronic conditions. Home Healthc Manag Pract 2021;33:239-44.
11. Gilsenan J, Gorman C, Shevlin M. Explaining caregiver burden in a large sample of UK dementia caregivers: The role of contextual factors, behavioural problems, psychological resilience, and anticipatory grief. Aging Ment Health 2023;27:1274-81.
12. Fang L, Dong M, Fang W, Zheng J. Relationships between care burden, resilience, and depressive symptoms among the main family caregivers of stroke patients: A cross-sectional study. Front Psychiatry 2022;13:960830.
13. Keniş-Coşkun Ö, Atabay CE, Şekeroğlu A, Akdeniz E, Kasil B, Bozkurt G, *et al*. The relationship between caregiver burden and resilience and quality of life in a Turkish Pediatric rehabilitation facility. J Pediatr Nurs 2020;52:e108-13.
14. Sadeghian E, Khodaveisi M, Nabavian M. Perception of cancer patients and their close relatives about the disclosure of cancer. Iran J Cancer Care 2021;2:1-9.
15. Palacio C, Krikorian A, Limonero JT. The influence of psychological factors on the burden of caregivers of patients with advanced cancer: Resiliency and caregiver burden. Palliat Support Care 2018;16:269–77.
16. Moreno-González MM, Salazar-Maya ÁM, Tejada-Tayabas LM. Experiencia de cuidadores familiares de mujeres con cáncer demama: Una revisión integradora. Aquichan 2018;18:56-68.
17. Graneheim H, Lindgren B, Lundman B. Methodological challenges in qualitative content analysis: A discussion paper. Nurse Educ Today2017;56:29-34.
18. Houser J, Oja K. Nursing Research: Reading, Using, and Creating Evidence. Jones and Bartlett Learning; 2024.
19. Mardom MA, Fatemi M, Moradi A, Alazmani-Noodeh F, Farahani M. The necessity of educating cares of stroke patients-A review study. Q J Nurs Manag (IJNV) 2021;10:76-83.
20. Pourshaban Z, Moghimian M, Jouzi M. The effect of continuous care model on the burden care of family caregivers of stroke patients. J Nurs Educ 2023;12:27-35.
21. Shirinkam F, Shamsalinia A, Torabi Chafjiri R, Ghaffari F. Spiritual attitude of family caregivers in elder with stroke. Caspian J Health Aging 2019;4:37-44.
22. Bani Ardalan H, Motalebi SA, Shahrokhi A, Mohammadi F. Effect of education and telephone follow-up on care burden of caregivers of older patients with stroke. Iran J Ageing 2022;17:290-303.
23. Ikeuchi K, Nishida S, Orita Y, Sakamoto C. Conditions and situations of occupation-based practice for patients with severe acute cerebrovascular accident: A qualitative study. Asian J Occup Ther 2022;18:199-207.
24. Baghchaghi N, Kohistani H. Investigating the relationship between the level of disability of the elderly with stroke and the quality of life of their caregivers before and after discharge. Journal of Nursing Midwifery Faculty (Adv Nurs Midwifery) 2016;21:35-41.
25. Pessotti CFC, Fonseca LC, Tedrus GMAS, Laloni DT. Family caregivers of elderly with dementia Relationship between religiosity, resilience, quality of life and burden. Dement Neuropsychol 2018;12:408–14.
26. Leung DY, Chan HY, Chiu PK, Lo RS, Lee LL. Source of social support and caregiving self-efficacy on caregiver burden and patient's quality of life: A path analysis on patients with palliative care needs and their caregivers. Int J Environ Res Public Health 2020;17:5457.
27. Shali M, Ghorbani A, Muturipour P, Salehi Murkani E, Pourimran MS, Nikbakht Nasrabadi A. Explanation of nurses' experiences of adaptation mechanisms used in the face of COVID-19: A qualitative study. InNursing forum 2022;57:18-25.
28. Karimirad MR, Seyedfatemi N, Noghani F, Amini E, Kamali R. Resilience of family caregivers of people with mental disorders in Tehran. Iran J Nurs Res 2018;13:57-63.
29. Wang J, Liu J, Li L, Man J, Yue S, Liu Z. Effect of education and muscle relaxation program on anxiety, depression, and care burden in caregivers of acute stroke survivors: A randomized, controlled study. Medicine (Baltimore) 2021;100:e24154.
30. Deshields TL, Heiland MF, Kracen AC, Dua P. Resilience in adults with cancer: Development of a conceptual model. Psychooncology 2016;25:11–8.
31. Falzarano F, Moxley J, Pillemer K, Czaja SJ. Family matters: Cross-cultural differences in familism and caregiving outcomes. J Gerontol B Psychol Sci Soc Sci 2022;77:1269-79.
32. Bijnsdorp FM, Onwuteaka-Philipsen BD, Boot CRL, van der Beek AJ, Pasman HRW. Caregiver's burden at the end of life of their loved one: Insights from a longitudinal qualitative study among working family caregivers. BMC Palliat Care 2022;21:142.
33. Kontou E, Shokraneh F, das Nair R, Quinn T, Leonardi-Bee J, Thorpe N, *et al*. Psychological interventions for mood and cognition after stroke and transient ischaemic attack: A protocol for an umbrella review. F1000Res 2024;13:199.