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The Challenges of Caring for Kidney Transplant Recipients from the Perspective of Home Caregivers: A Content Analysis

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Abstract

Background: Kidney transplantation is the preferred treatment for end-stage renal disease, yet its long-term success depends heavily on sustained post-transplant care. Much of this responsibility falls on family members who serve as home caregivers.

Aim: This study aimed to explore and describe the challenges experienced by home caregivers of kidney transplant recipients from their lived perspectives using a qualitative content analysis approach.

Method: A qualitative study with a conventional content analysis design was conducted in Urmia, Iran. Eighteen primary home caregivers of adult kidney transplant recipients were recruited through purposive sampling from transplant clinics and follow-up centers. Data were collected through in-depth, semi-structured interviews conducted in Persian. Interviews were audio-recorded, transcribed verbatim and analyzed inductively using the Graneheim and Lundman method. MAXQDA software was used for data management.

Results: Analysis revealed one overarching theme, “A Vortex of Enduring Burdens,” reflecting the cyclical and overwhelming nature of caregiving. This theme comprised four main categories: (1) The Overwhelming Weight of Care Responsibilities, (2) Psycho-Emotional Erosion, (3) The Crushing of Personal and Social Identity, and (4) Socio-Economic Precarity, encompassing eleven subcategories. Caregivers reported persistent stress related to regimen management, emotional exhaustion, identity loss, social isolation, and financial and occupational instability.

Implications for Practice: Home caregivers of kidney transplant recipients experience profound, multidimensional burdens that extend beyond medical care. Addressing these challenges requires comprehensive caregiver-centered interventions, including education, psychological support, and policy-level support to promote sustainable family caregiving and improved transplant outcomes.

Keywords: Caregiver Burden, Home Caregivers, Kidney Transplantation, Qualitative Content Analysis

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Introduction

Kidney transplantation represents a cornerstone in the management of end-stage renal disease (ESRD), offering patients a renewed chance at life with improved quality and longevity compared to dialysis. Globally, the prevalence of ESRD is escalating, driven by factors such as diabetes, hypertension, and aging populations (1). According to the World Health Organization, chronic kidney disease affects approximately 10% of the adult population worldwide, with over 2 million individuals relying on renal replacement therapies annually (2). In Iran, the incidence of ESRD is particularly high, estimated at 400-500 cases per million population, placing immense pressure on healthcare systems and families alike (3). Successful transplantation not only alleviates the physical toll of dialysis but also demands rigorous post-operative care to prevent rejection, infections, and complications (4). However, the transition from hospital to home care shifts the responsibility significantly onto informal caregivers often family members who become pivotal in ensuring adherence to immunosuppressive regimens, monitoring vital signs, managing dietary restrictions, and providing emotional support (5).

The role of home caregivers in post-transplant care is multifaceted and profoundly challenging. These individuals, typically spouses, parents, or siblings, must navigate a complex landscape of medical, psychological, and socioeconomic demands without formal training (6). Literature from Western contexts, such as studies in the United States and Europe, highlights common burdens including caregiver fatigue, anxiety, depression, and financial strain due to medication costs and lost work productivity. For instance, a systematic review by Bevans and Sternberg underscores how caregivers experience "secondary trauma" from witnessing the recipient's vulnerabilities, leading to burnout rates as high as 40% (7). Yet, these findings may not fully translate to non-Western settings, where cultural norms emphasize familial duty and communal support, potentially exacerbating isolation or stigma (8). In Middle Eastern countries like Iran, Islamic values and extended family structures influence caregiving dynamics, but limited access to specialized home care services and economic disparities amplify challenges (3). Caregivers often contend with inadequate healthcare infrastructure, cultural expectations of self-sacrifice, and gender-specific roles, where women disproportionately bear the load (9).

Despite the growing body of research on transplant outcomes, few studies delve into the lived experiences of home caregivers, particularly through qualitative lenses. Quantitative approaches dominate, focusing on clinical metrics like graft survival rates, which overlook the human element of caregiving. Content analysis, as a methodological tool, allows for the systematic interpretation of textual data from interviews or narratives, revealing themes that quantitative data might obscure (10). In Iran, where kidney transplantation rates are among the highest in the region over 3,000 procedures annually localized insights are scarce. Urmia, a northwestern city in Iran with a diverse ethnic population including Kurds and Azeris, serves as a microcosm of these issues. Its proximity to Lake Urmia and environmental health concerns, such as water salinity linked to renal diseases, add unique contextual layers (11). Previous Iranian studies, like those from Tehran or Isfahan, have touched on patient perspectives but rarely amplify caregiver voices, creating a gap in understanding region-specific barriers (12). By elucidating these experiences, the research not only contributes to tailored interventions but also informs policy for enhanced support systems in Iran's healthcare framework. Ultimately, recognizing caregiver challenges is essential for holistic transplant success, fostering resilience and equity in post-transplant care.

Methods

This qualitative study employed a conventional content analysis approach to explore and describe the challenges experienced by home caregivers of kidney transplant recipients. Conventional content analysis is an inductive method that allows categories and themes to emerge directly from the data without imposing preconceived categories, making it suitable for phenomena with limited prior research in the specific cultural context. This design facilitated a deep understanding of caregivers' lived experiences and perspectives in providing home-based care (13).

The study was conducted in Urmia, West Azerbaijan Province, northwest Iran. Participants were recruited from the kidney transplant department and associated outpatient follow-up clinics at Imam Khomeini Hospital (a major referral center for kidney transplantation in the region), as well as private nephrology clinics and support groups for transplant patients in Urmia. Purposive sampling was used to select home caregivers who met the following inclusion criteria: (1) being the primary informal (family) caregiver providing ongoing daily or near-daily care to an adult kidney transplant recipient at home for at least 6 months post-transplant; (2) aged 18 years or older; (3) ability to speak and communicate in Persian (Farsi); (4) willingness to participate in in-depth interviews And (5) the patient 's transplant was at least six months. Caregivers of recipients with acute graft complications requiring hospitalization at the time of recruitment, professional paid caregivers, or those unwilling to provide informed consent were excluded. Sampling continued until data saturation was achieved, meaning no new codes, categories, or meaningful insights emerged from additional interviews.

Data were collected through individual, semi-structured, in-depth face-to-face interviews conducted from June 2024 to March 2025. Interviews were carried out by the primary researcher (a nurse or nursing PhD candidate experienced in qualitative research) in a private, quiet, and comfortable setting chosen by the participant (e.g., participant's home, hospital quiet room, or clinic consultation room) to ensure confidentiality and participant comfort. Recruitment continued until data saturation was achieved the point at which subsequent interviews yielded no new codes or insights relevant to the research questions. Saturation was discussed and confirmed collaboratively by the research team after the 16th interview; two additional interviews were conducted to confirm that no new themes emerged, resulting in a final sample of 18 participants.

An interview included open-ended questions such as: Could you tell me a little about yourself and your relationship to the transplant recipient? Walk me through a typical day in your caregiving role. What specific tasks or responsibilities fall to you? "What have been the most difficult or demanding parts of providing care since the transplant?" and "Can you describe a specific situation that was particularly challenging or stressful for you?" Interviews lasted approximately 40–70 minutes (average ~55 minutes) and were audio-recorded with participants' permission using a digital voice recorder. Field notes supplemented the recordings to capture contextual details.

Data analysis followed the conventional content analysis approach outlined by Graneheim and Lundman, which is suitable for deriving categories directly from the text without preconceived theories (13). The process involved: (1) verbatim transcription of interviews; (2) repeated reading of transcripts for immersion and holistic understanding; (3) identifying meaning units (words, sentences, or paragraphs related to the study aim); (4) condensing meaning units into codes; (5) grouping codes into subcategories based on similarities; (6) abstracting subcategories into main categories; and (7) formulating overarching themes that captured the essence of participants' experiences.

Analysis was iterative and concurrent with data collection to guide sampling. Transcripts were managed using MAXQDA software (version 12) for coding and organization. Two researchers independently coded a subset of transcripts, resolving discrepancies through discussion to ensure consistency. The final themes were reviewed for coherence and relevance to the raw data.
To enhance the rigor of the study, Lincoln and Guba's criteria for trustworthiness were applied (14): credibility, dependability, confirmability, and transferability. Credibility was enhanced through prolonged engagement (multiple readings and member checking, where three participants reviewed summaries of their transcripts and initial codes for accuracy), peer debriefing (regular meetings with the research team), and triangulation (comparing data across diverse participants). Dependability was achieved via an audit trail documenting all decisions, from raw data to themes. Confirmability was supported by reflexive notes and independent coding to minimize researcher bias. Transferability was promoted by thick descriptions of the context, participant characteristics, and direct quotes in reporting, allowing readers to assess applicability to other settings. The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was followed to ensure comprehensive reporting (15).

Ethical Consideration

This study was approved by the Ethics Committee of Urmia University of Medical Sciences (approval code: IR.UMSU.REC.1403.051). Written informed consent was obtained from all participants after explaining the study purpose, voluntary nature, right to withdraw, confidentiality measures, and use of anonymized data. Participants were assured that declining participation would not affect their or their family member's care. Audio files and transcripts were stored securely on password-protected devices, with pseudonyms used to protect identities.

Results

The study included 18 primary home caregivers of KTRs. The majority were female (77.8%), reflecting the gendered nature of informal care in the context. Most were spouses (44.4%) or parents (22.2%) of the recipient. A significant proportion (61.1%) had a high school diploma or lower education level. Notably, 72.2% were not employed outside the home, with caregiving being their primary role. The caregiving duration was substantial, with over half (55.6%) providing care for more than 3 years. The recipients' post-transplant time varied, with 38.9% being within 1-3 years post-transplant (Table 1).

Table 1: Demographic Characteristics of Caregiver Participants

Code	Relationship to Recipient	Gender	Age (Years)	Education Level	Employment Status	Duration of Care (Years)	Time Since Recipient's Transplant (Years)	Interview Duration (Minutes)
C1	Spouse	Female	48	High School Diploma	Homemaker	4	3	50
C2	Spouse	Male	52	Below High School Diploma	Employed (Part-time)	5	5	60
C3	Child	Female	32	Bachelor's Degree	Employed (Full-time)	2	2	45
C4	Mother	Female	56	Below High School Diploma	Homemaker	6	6	70
C5	Spouse	Female	41	Associate Degree	Homemaker	3	3	55
C6	Spouse	Male	47	High School Diploma	Employed (Full-time)	4	4	58
C7	Spouse	Female	39	High School Diploma	Homemaker	2.5	2.5	52
C8	Sister	Female	36	Bachelor's Degree	Employed (Full-time)	3	3	48
C9	Sister	Female	44	Associate Degree	Unemployed	5	5	65
C10	Father	Male	61	Below High School Diploma	Retired	7	7	62
C11	Sister	Female	29	High School Diploma	Employed (Part-time)	1.5	1.5	40
C12	Mother	Female	58	Below High School Diploma	Homemaker	8	8	68
C13	Child	Male	35	Associate Degree	Employed (Full-time)	2	2	47
C14	Child	Female	37	Bachelor's Degree	Homemaker	3.5	3.5	56
C15	Spouse	Female	50	High School Diploma	Homemaker	6	6	70
C16	Mother	Female	54	Below High School Diploma	Homemaker	4.5	4.5	60
C17	Spouse	Female	43	Bachelor's Degree	Unemployed	3	3	54
C18	Father	Male	59	High School Diploma	Employed (Full-time)	5	5	61

Initially, 1,157 initial codes were generated, which were condensed into 11 subcategories, grouped under 4 main categories, and ultimately synthesized into a single overarching main theme: "A Vortex of Enduring Burdens". The detailed structure of the main theme, categories, and subcategories is presented in Table 2.

Table 2: Emerged Categories and Subcategories of Caregiving Challenges

Main Theme	Category	Subcategory
A Vortex of Enduring Burdens	The Overwhelming Weight of Care Responsibilities	Relentless Regimen Management Vigilance Against Invisible Threats Navigating the Healthcare System
	Psycho-Emotional Erosion	Chronic Anxiety and Uncertainty Grief for Lost Normalcy Emotional Contagion from the Recipient
	The Crushing of Personal and Social Identity	Dissolution of Self-Care Social Isolation and Loneliness Role Strain and Family Tensions
	Socio-Economic Precarity	Financial Drain Occupational Disruption

1. Category: The Overwhelming Weight of Care Responsibilities

This category encompasses the immense, all-consuming, and continuous practical duties that dominate the caregiver's daily existence, extending far beyond typical familial roles into a domain of medically necessary, high-stakes labor. It represents a totalizing occupation that dictates the rhythm of every day and night, transforming the home into a de facto clinical setting and the caregiver into a perpetually on-duty nurse, administrator, and advocate.

1.1. Subcategory: Relentless Regimen Management

This involves the precise, unforgiving administration of a complex medical protocol that governs every hour of the day and night. It extends beyond simple task completion to embody a state of perpetual accountability, where any deviation carries potentially catastrophic consequences, transforming the caregiver into both a disciplined technician and a terrified guardian of the treatment plan.

"The medicines are on a tight schedule, day and night. Missing even one dose fills me with terror... His whole life depends on this routine." (Caregiver 7, spouse)

1.2. Subcategory: Vigilance Against Invisible Threats

This denotes a state of hyper-alertness where the caregiver perceives the ordinary world as a landscape filled with hidden dangers. It is the psychological and practical stance of maintaining a sterile fortress, constantly scanning for microscopic threats like pathogens or subtle physiological changes, which makes genuine relaxation impossible and social interaction a calculated risk.

"We live in a bubble. Every cough, every slight fever, is a potential disaster. I can't relax." (Caregiver 12, mother)

1.3. Subcategory: Navigating the Healthcare System

This encompasses the draining, often demoralizing struggle to operate within a complex and fragmented medical bureaucracy. It involves battling inconsistent communication, deciphering opaque rules, advocating tirelessly for basic needs, and managing the logistical and financial fallout of a system that often feels indifferent and impossibly difficult to traverse.

"Every follow-up is a battle: arranging referrals, waiting for hours, explaining everything anew to each doctor." (Caregiver 3, daughter)

2. Category: Psycho-Emotional Erosion

This category describes the insidious and cumulative wearing away of the caregiver’s psychological resilience and emotional stability. It is the slow internal collapse under the pressure of sustained stress, where fear, grief, and fatigue metastasize, fundamentally altering the caregiver’s inner landscape and capacity to cope.

2.1. Subcategory: Chronic Anxiety and Uncertainty

This is a pervasive, background hum of dread focused on future health outcomes and the ever-present possibility of crisis. It manifests as a state of permanent apprehension that hijacks quiet moments and the night, where the mind compulsively cycles through catastrophic "what if" scenarios without resolution or relief.

"Is the kidney still working? What if it stops? These questions are my uninvited guests at 3 a.m." (Caregiver 15, spouse)

2.2. Subcategory: Grief for Lost Normalcy

This is a profound, often silent, mourning for a former self and a lost way of life. It is the painful awareness that one’s own identity, ambitions, relationships, and simple daily freedoms have been indefinitely postponed or permanently sacrificed, creating a sense of life suspended in a painful "before and after" divide.

"I've forgotten who I was. My own dreams are packed away in a box labeled 'before the transplant.'" (Caregiver 9, sister)

2.3. Subcategory: Emotional Contagion from the Recipient

This refers to the unconscious absorption and mirroring of the patient's emotional state, where the caregiver’s own well-being becomes inextricably tied to the recipient’s moods, fears, and frustrations. It leads to a shared emotional prison, depleting the caregiver’s reserves as they attempt to manage both their own and the patient’s distress.

"When he is depressed and angry about his limitations, I absorb it all. By nightfall, I am empty and sad too." (Caregiver 5, wife)

3. Category: The Crushing of Personal and Social Identity

This category details the systematic dismantling of the caregiver’s individual persona and their connections to the world. The all-encompassing caregiving role acts as a vortex, pulling in all time, energy, and attention, thereby eroding the very foundations of selfhood and social belonging.

3.1. Subcategory: Dissolution of Self-Care

This represents the complete relegation of the caregiver’s own physical and mental health to the status of non-essential. Personal needs are consistently framed as indulgences or obstacles to the primary mission of care, leading to a dangerous pattern of self-neglect where the caregiver becomes a ghost in their own life.

"My own doctor's appointments? I cancel them. A haircut? There's no time. I am last on my own list." (Caregiver 14, daughter)

3.2. Subcategory: Social Isolation and Loneliness

This is the enforced and gradual withdrawal from the wider social world, driven by both pragmatic constraints and protective instincts. As connections atrophy and invitations cease, the caregiver’s universe contracts to the sterile confines of home and hospital, creating a profound sense of being forgotten and alone in their struggle.

"Invitations have stopped coming. Our world has shrunk to these four walls and the hospital corridor." (Caregiver 2, husband)

3.3. Subcategory: Role Strain and Family Tensions

This encompasses the internal conflict and external discord that arise when the caregiving role catastrophically collides with other vital familial responsibilities. The caregiver is torn between competing demands, often feeling they are failing on all fronts, while resentment and lack of shared burden from other family members create fractures in previously stable relationships.

"My children say, 'Mom only cares for Uncle.' My marriage is under a silent strain. I am failing everyone." (Caregiver 11, sister)

4. Category: Socio-Economic Precarity

This category highlights the tangible, destabilizing impact of caregiving on financial security and professional life. It moves beyond stress into the realm of material consequence, where the costs of care and demands of the role actively undermine economic stability and jeopardize long-term career prospects.

4.1. Subcategory: Financial Drain

This is the direct and often relentless depletion of financial resources due to both direct medical costs and the indirect expenses of sustained caregiving. It leads to difficult choices, asset liquidation, debt accumulation, and a constant, grinding anxiety about money that compounds the emotional strain of the health crisis.

"We sold our car for medical bills. I work night shifts now to pay for his anti-rejection drugs, which are like gold." (Caregiver 6, spouse)

4.2. Subcategory: Occupational Disruption

This describes the derailment of the caregiver’s professional trajectory, involving reduced hours, forced leave, or complete withdrawal from the workforce. This disruption not only creates immediate income loss but also carries long-term consequences for career progression, retirement savings, and a sense of professional identity and purpose.

"I was a teacher. I had to take unpaid leave. Now I fear I may never return to my classroom." (Caregiver 17, wife)

Discussion

The findings of this qualitative content analysis illuminate the profound and multifaceted challenges encountered by home caregivers of kidney transplant recipients (KTRs) in Urmia, Iran. The overarching theme, "A Vortex of Enduring Burdens," encapsulates the cyclical, inescapable nature of these burdens, where practical caregiving demands intersect with emotional, social, and economic hardships, perpetuating a state of chronic strain. This theme aligns with the study's objective to explore caregivers' lived perspectives, revealing how post-transplant care extends beyond medical adherence to encompass a holistic erosion of well-being. By employing conventional content analysis, we derived categories directly from participants' narratives, highlighting the inductive emergence of themes that resonate with, yet extend, existing literature on caregiver burden in chronic illness contexts.

Caregivers described an unrelenting load of responsibilities, including regimen management, vigilance against complications, and navigation of healthcare systems, which dominated their daily lives and fostered persistent stress. This category echoes findings from Western studies, such as Murali et al., who reported similar practical burdens among Australian rural caregivers of dialysis and transplant patients, including medication adherence and infection monitoring (16). However, in our Iranian context, these challenges are amplified by cultural expectations of familial duty, where caregivers often assume these roles without formal support, as noted in Hejazi et al. on Iranian hemodialysis caregivers (3). The subcategory of "Relentless Regimen Management" underscores the terror associated with potential non-adherence, mirroring Glaze et al. (2), who identified gaps in posttransplant support leading to caregiver overwhelm (17). Similarly, "Vigilance Against Invisible Threats" reflects a hyper-vigilant state akin to "secondary trauma" described by Divdar and Sternberg in cancer caregiving (18), but here it is compounded by environmental factors in Urmia, such as water salinity linked to renal issues (11). Navigating the healthcare system, marked by bureaucratic hurdles and inconsistent medical communication, aligns with Nezhad et al., who highlighted barriers to integrating telemedicine in Iranian kidney care, suggesting that fragmented services exacerbate caregiver strain (19). These findings emphasize that while practical burdens are universal, in resource-limited settings like Iran, they manifest as a vortex due to inadequate infrastructure and cultural norms prioritizing family over institutional aid.

The emotional toll on caregivers emerged as a gradual deterioration, characterized by chronic anxiety, grief for lost normalcy, and emotional contagion from the recipient. This category corroborates quantitative and qualitative evidence of psychological distress in transplant caregiving, such as Adejumo et al., who found diminished quality of life among caregivers of end-stage kidney disease patients due to anxiety and depression (20). In our study, "Chronic Anxiety and Uncertainty" captures the pervasive fear of graft failure, similar to Tan et al. in allogeneic bone marrow transplant caregivers, where uncertainty leads to emotional exhaustion (8). The "Grief for Lost Normalcy" subcategory reveals a mourning process for pre-transplant life, resonating with Rasmussen et al., who noted caregiver burden in hemodialysis contexts, but extends this to transplant-specific losses like sidelined aspirations. Emotional contagion, where caregivers absorb the recipient's distress (21), aligns with Khouban-Shargh et al., demonstrating how shared emotional states amplify burden in Iranian hemodialysis families (9). Culturally, in Iran, where Islamic values emphasize self-sacrifice and emotional resilience (22), caregivers may internalize these burdens silently, leading to higher rates of unreported depression compared to Western cohorts (23). This erosion underscores the need for targeted psychological interventions, as supported by interventions like stress management training in Khouban-Shargh et al., which reduced perceived stress among Iranian caregivers (24).

Caregivers experienced a profound loss of self and social connections, with subcategories illustrating the dissolution of self-care, social isolation, and role strain. This category builds on Akbari et al. (11), who linked caregiver burden to depression and reduced quality of life during the COVID-19 pandemic in Iran, where isolation was exacerbated by external factors (25). "Dissolution of Self-Care" highlights the deprioritization of personal health, consistent with Bevans and Sternberg (7), who reported health effects like burnout in up to 40% of caregivers. Social isolation, driven by infection fears and time constraints, mirrors De Beir et al., emphasizing gaps in social support for posttransplant caregivers (2). In our findings, this is intensified by Iran's family-centered culture, where women disproportionately shoulder roles, leading to gender-specific strains (26). "Role Strain and Family Tensions" reveals conflicts from neglecting other familial duties, aligning with Hejazi et al., who described relational disruptions in Iranian caregiving (3). These insights suggest that identity loss is not merely individual but socially constructed, particularly in collectivist societies like Iran, where communal expectations can heighten feelings of failure and loneliness.

Financial and occupational disruptions formed a critical category, with caregivers facing debt, job loss, and insecurity due to care demands. This aligns with global evidence, such as Russell et al., who noted economic strain reducing caregiver quality of life (27). In Iran, where ESRD incidence is high (3) and healthcare costs are often out-of-pocket, "Financial Drain" is particularly acute, as seen in the sale of assets for medications, echoing Mahdavi et al. (28). "Occupational Disruption" reflects lost productivity, consistent with Scholes-Robertson et al., but in our context, it is worsened by limited social welfare and employment protections for caregivers (1). Gender dynamics further compound this, as many female caregivers (homemakers or unemployed) lack independent income, amplifying precarity (9).

The multidimensional burdens identified necessitate caregiver-centered interventions. Education on regimen management and psychological support, such as peer groups, could mitigate practical and emotional strains. In Iran, integrating telemedicine and culturally tailored programs, like those promoting self-efficacy, may address access issues. Policy-level changes, including financial subsidies for medications and caregiver respite services, are crucial to alleviate socio-economic precarity. Healthcare providers should screen for caregiver burden routinely, fostering holistic care that views caregivers as "care recipients". By amplifying Iranian voices, this study contributes to equity in transplant outcomes, aligning with global calls for sustainable family caregiving.

Strengths include the inductive content analysis approach, ensuring themes emerged authentically from data, and rigorous trustworthiness measures, such as member checking and audit trails, enhancing credibility. The diverse participant sample from Urmia provides contextual depth, including ethnic influences (Kurds and Azeris). Limitations involve the single-site setting, potentially limiting transferability beyond northwest Iran, though thick descriptions aid applicability. The qualitative nature precludes generalizability, and self-reported data may be subject to recall bias. Future research should employ mixed methods or longitudinal designs to track burden evolution and intervention efficacy.

Subsequent studies could explore interventions in stroke caregiving, adapted for transplant contexts, or compare urban vs. rural Iranian caregivers. Investigating recipient-caregiver dyads or gender-specific experiences would deepen understanding. Globally, cross-cultural comparisons could inform universal support frameworks.

Implications for practice

In conclusion, this study reveals the vortex of burdens ensnaring home caregivers of KTRs in Iran, underscoring the need for comprehensive, culturally sensitive support to sustain their role and enhance transplant success. By centering caregivers' perspectives, we advocate for a paradigm shift from patient-focused to family-inclusive posttransplant care, promoting resilience and well-being in resource-constrained settings.

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Conflicts of interest

The authors declare no competing interests.

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Authors' Contributions

R.A. planned the study, formulated the interview guide, conducted interviews, transcribed and analyzed data, and drafted the manuscript. H.G. supervised the study, and contributed to data analysis and manuscript revisions. M.R. assisted in study planning, interview guide development, data analysis, and manuscript writing.

AI Statement

We acknowledge the use of ChatGPT (Open AI) to improve the clarity and language of manuscript. All concepts, data, analysis, and conclusion were prepared and developed by the authors.

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