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# Coping strategies of the sandwich generation in the care process: a qualitative study

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## Abstract

**Objective** The sandwich generation refers to individuals who are simultaneously responsible for caring for their aging parents and their own children. Research shows that the number of sandwich generation caregivers is increasing, and they face significant physical, psychological, social, and economic challenges. Therefore, it is crucial for these caregivers to develop effective coping strategies. This study aimed to identify the coping mechanisms used by sandwich generation caregivers.

**Methods** In 2022, during the COVID-19 pandemic, we conducted a qualitative study involving semi-structured interviews with 18 sandwich generation caregivers in Tehran, Iran, who were responsible for both elderly parents and their own children. These interviews were conducted either in person or by telephone. Subsequently, the collected data were analyzed using the inductive content analysis method within the MAXQDA software (2018 version).

**Results** Data analysis revealed three categories of coping strategies: “distancing from the situation”, “self-soothing” (including sub categories of spiritual matters, establishing relationships, emotional outlet, and engaging in favorite activities), and “diversifying responses to needs” (including transferring responsibility to the family members, prioritizing needs for responsiveness, utilizing available community services, mediating to reduce conflict, and remote monitoring of the older adult).

**Conclusion** Sandwich generation caregivers use various coping strategies, each with different outcomes. This study found that self-care and using social resources can greatly reduce caregiving burdens. Therefore, providing these caregivers with training in problem-solving and self-care skills is recommended to better prepare them for their responsibilities.

**Keywords** Children, Coping skills, Family caregiver, Older adults, Sandwich generation

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## Introduction

Demographic structures and individual life courses undergo changes under the influence of demographic trends, such as declining fertility rates and increasing life expectancy [1]. Within this group of the population, there is a noticeable increase in the number of older individuals facing chronic health conditions, necessitating specialized social services and informal caregiving by family members and friends [2]. According to available statistics, 10% of Iran's population consists of older adults [3]. Various factors influence the preference of Iranian older adult to reside with their families, including the cultural background of Iranian society, the financial burden associated with formal care, religious considerations, the comfort of home surroundings, and the availability of continuous access to social services [4, 5]. As informal caregivers, families provide essential support to their children under the age of 18, including protection from harm, food, clothing, shelter, financial support, supervision, and medical care. When they also need to care for their parents under the same roof, their responsibilities increase significantly. As a result, these adults often face the challenges of multigenerational caregiving, commonly known as the "sandwich generation" [6].

While precise statistics on the sandwich generation in Iran remain unavailable, insights can be drawn from the latest census data (2016) and the examination of three population reports. Notably, the results indicate the following: (1) a significant percentage of the older adult receive care within the family setting, with only about 0.2% relying on formal care services, (2) approximately 42.3% of households in the country consist of four or more individuals, and (3) more than 25% of the country's population comprises individuals under 18 years of age, with nearly 95% living with their families [7].

This population group requires sufficient allocation of energy, time, and resources to meet the needs of multiple generations simultaneously. In this context, caregivers may encounter various challenges, such as the difficulty of balancing family members, work-family balance, marital conflicts, physical, mental, financial, social burden, job challenges, etc [8, 9].

Studies were conducted to provide insights into the sandwich generation role balance and coping strategies. For instance, a qualitative study by Evans et al. (2016) showed that Australian female sandwich generation used six within-role balance strategies: living with integrity, being the best, you can, doing what you love, loving what you do, remembering why and searching for signs of success. The women also described six between-role balance strategies: maintaining health and wellbeing, repressing perfectionism, managing time and energy, releasing responsibility, nurturing social connection and reciprocating [10]. Timmers and Lengeler (2022) reported nine

coping strategies that the working sandwich generation uses to balance intergenerational care with a job in Flanders: (1) acceptance, (2) boundary management, (3) help-seeking, (4) planning, (5) governance, (6) self-care, (7) time focus, (8) values and (9) super-sandwich strategies [11].

Leahy (2022) emphasizes that the COVID-19 pandemic significantly affected the caregiving experience of the sandwich generation. Caregivers faced additional concerns due to social effects like increased isolation and changes in health behaviors. Understanding and implementing health behaviors, such as isolation and vaccination, were crucial during the pandemic for protecting the health of both their children and elderly parents. The stress from juggling multiple caregiving roles and the compounded pressures of childcare and eldercare during a high-tension period where resources and privilege influenced health outcomes [12].

A study in Iran examined the experiences of the Iranian female sandwich generation in multigenerational caregiving during the COVID-19 pandemic. It found that these women adopted information and communications technology tool-based strategies to protect older adults from infection and voluntarily imposed double quarantine measures on themselves and their care recipients. Emotional exhaustion was rampant among the caregivers influenced by the experiences that were related to the information and communications technology tools and the voluntarily double quarantine [13].

Sudarji, Panggabean, and Marta (2022) categorized the coping strategies of sandwich generation caregivers into two types: emotion-focused and problem-focused. Emotion-focused strategies include distancing, escape-avoidance, accepting responsibility, self-control, and seeking emotional social support. The three identified problem-focused strategies are confrontative coping, seeking informational support, and problem-solving (14).

According to the functionalist perspective on family caregiving, families serve several key functions: providing economic support; offering nurturance, education, and socialization; and protecting vulnerable members. Caring for both children and elderly individuals can exhaust caregivers physically and emotionally, potentially leading to depression, social isolation, and the loss of social networks [15]. Bowen's family systems theory emphasizes that behavior patterns, emotional responses, and relationship dynamics are passed down through generations. By recognizing and understanding these patterns, individuals can break free from unhealthy cycles and develop healthier relationships for themselves and future generations [16, 17]. Sandwich generation caregivers, along with the children and elderly individuals they care for, create a subsystem within the family. The conflicts, stress management techniques, and coping strategies employed

within this subsystem can significantly impact the health and functioning of its members and the overall family dynamic.

This study investigates the coping strategies of sandwich generation caregivers in Tehran, Iran, who simultaneously care for both elderly parents and their children within the same household. While Rayanpour et al. (2022) conducted a qualitative analysis of caregivers' experiences during the COVID-19 pandemic in Shiraz, our study stands out in several key ways.

Firstly, Rayanpour et al.'s research focuses on caregivers during the pandemic in a culturally homogeneous city, Shiraz, whereas our study takes place in Tehran, a multi-cultural metropolis. This broader cultural context allows for a more diverse exploration of caregiving strategies and the potential influence of varying cultural norms on caregiving experiences.

Secondly, Rayanpour et al. (2022) identified sandwich generation caregivers based on their involvement with two generations but did not specify whether they cohabited with them. Our study, in contrast, specifically focuses on caregivers living under the same roof with both generations. This distinction is crucial, as cohabitation presents unique challenges and necessitates distinct coping mechanisms, which are underexplored in existing research.

Furthermore, while Rayanpour et al.'s study is limited to caregiving during the COVID-19 pandemic, our research covers the entire caregiving process, both during and outside the pandemic. This allows us to capture a more comprehensive range of coping strategies that may evolve across different caregiving phases, offering a broader understanding of how sandwich generation caregivers manage multigenerational caregiving responsibilities.

By emphasizing the lived experiences of caregivers in a shared household and examining their strategies over a longer period, our study offers fresh insights into the complexities of caregiving in a multigenerational household. This contributes to a deeper understanding of the dual pressures faced by sandwich generation caregivers, as well as the coping strategies they develop to manage these responsibilities.

Insights gained from studying their experiences could not only support caregivers in similar situations but also inform future responses to adversity. Addressing this gap is vital for developing targeted interventions and support systems tailored to the needs of sandwich generation caregivers, enhancing their well-being and resilience.

Policy-making and planning for the sandwich generation are critical considerations, especially concerning the welfare of older adults and their families [18]. Understanding how sandwich generation caregivers navigate these challenges is essential for effective policymaking and planning. Mismanagement of these challenges can

exacerbate caregiving difficulties over time, underscoring the need for appropriate coping strategies. This study seeks to deepen our understanding of the coping strategies utilized by sandwich generation caregivers in Tehran, Iran. Its findings will inform future healthcare provisions aimed at supporting these caregivers in managing multigenerational caregiving responsibilities and balancing their multiple roles.

## Method

The qualitative content analysis method was employed to examine the coping strategies utilized by caregivers of the sandwich generation in the caregiving process.

## Participants and recruitment

This study was conducted in 2022 among sandwich generation caregivers in Tehran, Iran. The participants in this study were recruited from diverse settings:

**Rofideh Rehabilitation Hospital:** This hospital was founded in 2013 in the northeastern part of Tehran. Both inpatient and outpatient rehabilitation services are delivered to clients in this hospital. Clients with spinal cord injuries, brain injuries, strokes, multiple sclerosis (MS), cerebral palsy, and other sensory and motor impairments are admitted in Rofideh Rehabilitation Hospital. Most of the patients are accompanied by their caregivers during their hospitalization or while they receive outpatient services.

**Sharif Charitable Philanthropists Institute:** This institute provides services to orphans and female-headed households. The clients receive rehabilitation services as well as financial and social support. Some female-headed households are sandwich generation.

**Values Revival Institute:** This non-governmental, non-profit organization was established in 1999, and dedicates to crisis prevention, intervention, and mitigation of social issues. Clients of this institute are accompanied by their family caregivers and some of them were sandwich generation.

The first two authors have work experience at Rofideh Rehabilitation Hospital but did not work directly with the eligible participants in this study. Additionally, none of the authors have worked with the Sharif Charitable Philanthropists Institute or the Values Revival Institute. We parallelly shared a poster which included information about the study through visits to the organizations that provided services to children, families, and older adults. Additionally, an announcement about the study was posted in virtual spaces such as Telegram, WhatsApp, and Instagram. The announcement provided information about the study's purpose, the inclusion criteria, and details on how the data would be collected (through in-person or phone interviews, depending on the participant's preference).

The research team initially contacted potential participants by phone. The phone numbers of these potential participants were obtained through the organizations they were associated with (Rofideh Rehabilitation Hospital, Sharif Charitable Philanthropists Institute, and Values Revival Institute). The research team worked closely with administrative staff at these institutions, who, with the participants' consent, provided the contact details to the research team. Before sharing any contact information, the organizations obtained verbal consent from the participants to ensure they were informed about the nature of the study and their potential involvement. During the phone call, the inclusion criteria were reviewed, and the participants were invited to take part in the study.

The snowball sampling method was applied to identify additional participants based on the information provided by the initial sample [19]. In this qualitative research we aimed to explore phenomena thoroughly, so purposive sampling was used as a suitable method for recruiting the participants that were rich in information relevant to the phenomenon under study [20].

All persons who were the caregiver of at least two generations (at least a child under the age of 18 and an older adult parent) under one roof, provided consent to participate in the research, did not have a psychiatric disorder, and had the ability to speak Persian were eligible to participate in this study. All participants accessed services from medical or rehabilitation centers, as well as social support organizations, through which they were connected to the research team. To ensure that participants did not have psychiatric disorders, we examined their profiles at these centers, which maintain thorough records of individuals' mental health statuses. It is important to note that the records of eligible individuals referred by the centers and hospital were provided to the research team by the resident social worker.

#### **Data collection**

We collected data using semi-structured interviews. Interviews depending on the participant's preference were conducted either in person (e.g. in the social work office in Rofideh Rehabilitation Hospital, Sharif Charitable Philanthropists Institute or Values Revival Institute or the participant's home) or via phone calls.

The first author (a PhD student of social work) interviewed participants. The interviews ranged in duration from 30 to 60 min. To maintain accuracy and capture the richness of the data, all interviews were recorded using a smartphone. Subsequently, the recorded interviews were transcribed verbatim by the first author. Importantly, before the interviews commenced, participants were informed that their recorded interviews would be shared with the research team for analytical purposes. Informed consent was obtained from all participants, with written

consent acquired for face-to-face interviews and verbal consent for phone interviews. This consent process included explicit information about how the recordings would be used and shared.

Although the primary responsibility for conducting and transcribing the interviews rests with the first author, the audio files of the interviews were made available to other members of the research team. They provided feedback to the interviewer in face-to-face or virtual meetings on various aspects of the interview, including time, location, and interview questions. This approach ensured that participants were fully aware of the use of their recordings and consented to their sharing with the research team. The study adhered to ethical guidelines to maintain transparency and confidentiality throughout the research process.

The primary research question focused on understanding how sandwich generation caregivers navigate their unique circumstances. To explore this, we utilized open-ended questions such as: "Could you describe your experience living under one roof with both children and parents?"; "Could you walk us through a typical day, from morning to night, in caring for both your parents and children?"; "What specific tasks do you undertake for your parents/ children throughout the day?"; "What are the major challenges you face in simultaneously caring for both children and parents?"; "How have you managed to cope with this situation?";

To ensure that the interviews provided rich and meaningful data, we employed a technique of iterative questioning. This involved probing deeper based on participants' initial responses, asking follow-up questions to clarify and expand upon their answers, and encouraging participants to reflect on their coping strategies in greater detail. This iterative process helped us gather more nuanced information and provided a fuller picture of the caregivers' experiences.

Our sampling strategy was designed to meet the research objectives, incorporating purposive and snowball methods. Sampling continued until data saturation was reached, where no new information or themes emerged. However, we also considered the concept of "information power," which emphasizes the quality and relevance of the data collected. Information power was assessed by evaluating the depth and applicability of the information relative to our research questions, rather than merely the volume of data. When the research team recognized that data saturation had been reached, any participants who were still interested in contributing were informed of this. Those individuals were thanked for their willingness to participate but were not interviewed further. The team explained that the data collected thus far was sufficient to address the research questions and objectives. This approach was communicated with

respect and gratitude to ensure that participants understood the situation.

The primary research question focused on understanding how sandwich generation caregivers navigate their unique circumstances. To confirm saturation and assess information power, we continuously analyzed the data throughout the research process. New interviews were compared with existing data to identify recurring themes and patterns. When additional data no longer revealed new insights or themes, saturation was confirmed. This iterative process ensured that our findings were both comprehensive and rich in detail, addressing the research questions effectively.

### Data analysis

Inductive or qualitative content analysis serves the purpose of condensing and categorizing acquired data, enabling researchers to address their research inquiries through identified concepts, categories, and themes [21]. The research team began by conducting open coding, a meticulous line-by-line examination of the interview transcripts. This process involved identifying and labeling emerging concepts and discrete phenomena within the data. The open coding was performed collaboratively, with team members discussing and refining the codes to ensure consistency and accuracy.

After open coding, the identified codes were organized into categories and sub-categories based on their similarities. This step involved grouping the codes under common headings that represented broader concepts. The categories were refined through iterative discussions among the research team, ensuring that they accurately reflected the data and were relevant to the research questions.

The final step in the analysis was the derivation of main categories from the amalgamated sub-categories. These main categories represented the core themes that emerged from the data, encapsulating the key coping strategies used by sandwich generation caregivers. The research team continuously revisited the data to confirm that these categories were grounded in the participants' experiences. Finally, the main categories were derived from amalgamated sub-categories. All analytical steps were facilitated using MAXQDA software (2018 version) [22]. This software was essential in managing, organizing, and visualizing the qualitative data, facilitating the coding process, and helping the research team track and retrieve data segments efficiently.

### Trustworthiness

Guba and Lincoln (1994) introduced credibility, transferability, dependability, confirmability, and authenticity to evaluate the trustworthiness of qualitative studies [23]. Our research endeavors were directed towards a

comprehensive exploration of the sandwich generation coping strategies, with the aim of shedding new light on this critical field of inquiry. Our research team brought to bear a wealth of scientific and practical experience in the realm of social work, specifically catering to older adults and children. This amalgamation of expertise proved instrumental in guiding our research trajectory.

This methodological choice was underpinned by the proficiency of our research team, all of whom were well-trained and regarded as experts within the domain of qualitative research. Their extensive knowledge and experience fostered a collective enthusiasm to embark on this research journey.

Simultaneously, data collection and analysis were seamlessly integrated into our research process, allowing for dynamic interactions between these two crucial facets. This iterative approach ensured that our findings were grounded in the data and that the coping strategies were authentically portrayed. During the research process, the researchers tried to engage with the participants for a long time, so this process lasted for 12 months.

Throughout the research process, our team engaged in regular weekly meetings to ensure ongoing collaboration and address any emerging issues. We actively sought feedback from field experts to enhance the rigor of our data collection and analysis, which added an additional layer of validation to our work. Reflexivity was a key component of our approach; we continuously reflected on our roles, biases, and potential influences on the research outcomes. This self-awareness was facilitated by clear communication of project expectations, objectives, and scope, ensuring that all team members understood the research goals, methodology, and deliverables. Regular discussions about progress and challenges allowed us to address any biases or assumptions and adjust our methods accordingly. We also provided the research team, including the PhD student, with necessary training and resources, which included workshops on research methods, data analysis, and academic writing. By maintaining quality control and managing the project's timeline proactively, we not only ensured effective supervision but also continually assessed and adjusted our approach to uphold the integrity and reflexivity of our research.

### Results

A total of 18 sandwich generation caregivers participated in our study. All of them were female caregivers of at least one child and one older adult person at the same time and under the same roof. The age range of participants was 31–60 years and the length of caregiving duration reported from 6 to 228 months. Participating caregivers were employed (28%), retired (11%), or housewives (61%).

Caregivers may find themselves in a multi-generational caregiving role due to various factors. They experience



the phenomenon of being “sandwiched” because they are exposed to the simultaneous care demands and needs from both elderly parents and their own children. Caregivers in the sandwich generation face different challenging conditions within the caregiving context, influenced by intervening and contextual factors. They employ various coping strategies in response to these challenges. The primary focus of this study is to examine the coping strategies employed by caregivers in various caregiving conditions.

Analysis of collected data revealed that the sandwich generation employs various strategies to mitigate the challenges associated with caregiving. Some of them wished they could live apart from the older adult. They found themselves engaged in a round-the-clock duties with no time off. Some of them said that they just wanted to be away from their family for a short time to relax and reach peace. But these wishes were impossible in practice. They found themselves forced to continue under the

same conditions: being a full-time caregiver of two generations with endless and perpetual tasks.

Throughout the different stages of our analysis, we classified practical strategies that the participants apply in their real life into three distinct categories: “Distancing from the Situation,” “Self-Soothing,” and “Diversifying Responses to Needs (Table 1)”.

In the following sections, we will elucidate each category separately by incorporating relevant quotes from our study participants.

#### Distancing from the situation

This strategy sheds light on how sandwich generation caregivers grapple with the complex dynamics of simultaneously caring for elderly parents and raising their own children. The essence of this strategy lies in the caregiver’s endeavor to create a degree of separation or distance among the individuals under their care. In essence, the caregiver strives to prevent or minimize direct interactions between their elderly parents and their children.

**Table 1** Sample quotations, codes, and categories extracted from interviews

Sample Quotations	Open Codes	Sub-categories	Categories
Participant No. 4: “Some days, I can’t take it anymore and get very tired. I just want to go somewhere where no one is around and I can’t see anyone, a place without a phone, TV, or even water and electricity. I just want a place where I can have peace. I want to come back after two months because all the pressure is on my shoulders.”	Taking a break from family to reduce caregiving pressure	Distancing from the Situation	Distancing from the Situation
Participant No. 5: “I mostly talk to God, send blessings. These actions somewhat calm me down because I believe that God hears my words.”	Sending blessings Talking to God to calm oneself	Spiritual Matters	Self-Soothing
Participant No.14: “Besides talking to my sisters, I can’t do anything else. I have four sisters whom I discuss my problems with.”	Calling my sister to calm oneself	Establishing Relationships	
Participant No.11: “When I feel overwhelmed and am not in a good state, I pick up the phone and call someone. I have a sister who is my confidante, and I talk to her. Sometimes I cry... She guides me and talking to her calms me down to some extent.”	Crying to a friend to calm oneself	Emotional Outlet	
Participant No.17: “To keep myself cheerful, I exercise in the mornings after waking up from sleep.”	Exercising to feel cheerful	Engaging in Favorite Activities	
Participant NO, 11: “If my in-laws were not here, we wouldn’t have a home now. Previously, when they were healthier, they took care of my children and provided them with everything they needed.”	Delegating the responsibility of caring for grandchildren to the older adult	Transferring responsibility to the family members	Diversifying Responses to Needs
Participant No.1: “There was a period when my mother-in-law was ill, so her condition was my priority because my daughters were older and could handle their own tasks. After taking care of my mother-in-law, I would come to my daughters to talk with them or help my younger daughter with her studies.”	Prioritizing the needs of older adult due to her illness	Prioritizing Needs for Responsiveness	
Participant No.3: “Well, I’ve been lucky to get acquainted with the Center for Vaght-e-Zendegi. They have helped me a lot because my mother is very physically weak, and the rehabilitation services they provide have made her stronger. This has made caregiving somewhat easier for me.”	Using day care center services	Utilizing Available Community Services	
Participant No. 1: “In the beginning, my daughter used to complain about my mother’s frequent urination, which caused her to become stubborn with my mother. That’s why I tried to explain to her about old age and its challenges, using this approach to manage the situation.”	Reducing tensions by educating children about the aging process	Mediating to Reduce Conflict	
Participant No. 2: “Currently, due to my mother’s condition, I’ve been forced to hire a nurse to take care of her while I’m at work. However, I still worry about my mother, and I find myself making frequent calls to both the nurse and my mother. I don’t understand why I can’t trust anyone.”	Frequent calls to the older adult to check older adult Employing a formal caregiver	Remote Monitoring of the Older adult	

This approach is born out of a profound understanding that interpersonal conflicts or challenges can arise when these two generational groups coexist closely within the same caregiving environment.

The caregiver's motivation for adopting this distancing strategy is twofold. Firstly, it aims to reduce potential sources of tension or friction between elderly parents and children. By keeping them apart, the caregiver aims to minimize the likelihood of conflicts, disagreements, or misunderstandings that can arise due to differences in age, needs, or expectations. Secondly, this strategy often stems from a genuine desire to provide the best care possible to both generational groups. By ensuring that each group has its space and attention, caregivers believe they can meet the unique needs of elderly parents and children more effectively, ultimately enhancing the quality of care provided.

Participant No. 15 stated:

*"We would register the children for different classes so that they would be away from home for a period of time or I would take them to the park so that they would be away from home. Because they [children and older people] have conflicts at home and it affected their morale. That's why I try to get them out of the house as much as possible."*

Enrolling children in various educational classes or taking them to the park was a method for managing the relationships between children and their elderly parents. By using this approach, participants found an opportunity to achieve peace, and reduce the mental burden within the home environment. Other participants also employed this strategy to mitigate conflicts between their children and their elderly mother.

Participant No. 4:

*My house is a two-bedroom apartment. My mother occupies one of the bedrooms. This means that since my mother came to our home, we've had to give one of the bedrooms to her [where was the children's room before]. Consequently, the children had to study in the living room, and currently, they have no place of their own. My children are studying for university entrance exams in these conditions. They all prefer to study in their own room and want a peaceful environment for studying. When they wake up in the morning, I tell them to study in my and my spouse's room. When my spouse returns from work, they have to go back to study in the living room so that their father can rest. In their own room, my mother talks to them, which distracts them. I tell her not to engage with the children, to let them study, but she doesn't understand. She sits in the room,*

*looks at them, and says, "Well done, study hard, God willing, you will succeed." I tell my mother not to say these things because it distracts them....*

Their differences stemmed from sharing a room. The sandwich generation employed a strategy to control and prevent conflicts, which was to separate the sleeping and resting space of the children from their grandmother. This approach disrupted the children's study routine but reduced the conflicts between them and their grandmother.

### **Self-soothing**

Caregiving can be emotionally difficult, as caregivers often experience a range of emotions of frustration, anxiety, sadness, and even anger. Caregivers who practice self-soothing techniques are more resilient in the face of challenges. These techniques equip them with tools to deal with difficult situations and effectively continue care. Caregivers use various techniques such as projecting feelings, communicating, doing spiritual things or doing favorite things in order to achieve peace. The techniques used vary from caregiver to caregiver. In the following we reported subcategories including spiritual matters, establishing relationships, emotional outlet, and engaging in favorite activities.

### **Spiritual matters**

Understanding self-soothing with spiritual issues as a solution in the caregiving process refers to finding peace, comfort, and a sense of inner peace through spiritual beliefs and practices during times of stress, difficulty, or caregiving challenges. Practicing activities such as praying, meditation, or reading scriptures can serve as effective coping mechanisms. These practices provide a way to channel anxiety, grief, and other challenging emotions into a constructive outlet.

Participant No. 2:

*"Sometimes my son needs help with his studies, and at the same time, my mother calls for me. In these situations, I feel a lot of pressure... Reciting prayers and reading religious texts help calm me down. By soothing myself with prayer, I'm better able to respond to their needs."*

In stressful and challenging situations, they sought methods to control stress, anxiety, frustration, and any negative emotions. After calming themselves down, they continued to fulfill their caregiving responsibilities.

Participant No. 16:

*I talk to God and say, "Oh God, grant me tranquility." Praying, visiting places of pilgrimage, and places*

*with spiritual significance calm me down. I seek help from the clergy or anything spiritual that can soothe my mind. I say to God, "grant me serenity."*

For the sake of preserving respect and a sense of responsibility towards their children and elderly father, participant No.16 did not express her fatigue and emotions. That's why talking to God was her chosen method for venting and reducing the mental burden of caregiving.

### **Establishing relationships**

For many sandwich generation caregivers, maintaining connections through phone calls, online chats, or face-to-face conversations serves as a vital outlet for sharing their caregiving experiences, concerns, and triumphs. These interactions provide a safe and empathetic space where caregivers can vent their frustrations, seek advice, or simply express the emotional challenges associated with caregiving. Engaging with supportive networks plays a pivotal role in this strategy. Caregivers often find solace in connecting with others who share similar caregiving responsibilities or have experienced similar challenges. These connections foster a sense of belonging and understanding, offering caregivers the emotional validation and reassurance they seek.

In instances where sandwich generation caregivers are employed, interactions with their co-workers, whether within the physical workplace or through virtual communication, serve as an additional source of support and understanding. Caregivers often derive comfort from sharing their caregiving responsibilities with colleagues, who can offer empathy, practical guidance, and facilitation as required.

Participant No. 3:

*"Sometimes they [my parent and children] literally make me angry... I have a friend that I call when I'm down and talk to vent myself, then I get energized and come back to life... I remember I have learned to be patient."*

Talking to a good listener and sharing negative emotions with a friend help participants No. 3 to calm down and improve her energy. She also employed the strategy of establishing communication. She continued:

*"I believe having friends of the same age is very important. It's important for friends to understand our situation and provide help. When I get tired in life, I call my friend and share my problems with her. She tells me that everyone has problems, and I have problems too, and my situation is not worse than hers. She says these things to me, and I feel calmer and continue with my life energetically. These inter-*

*actions give me energy. If I've made a mistake, I can make up for it with these connections."*

This participant, through maintaining connections with her friends, aimed to stay socially active and find tranquility when she became tired of caregiving by talking and receiving empathy.

### **Emotional outlet**

The strategy of emotional outlet through emotional projection underscores the dynamic and adaptive nature of caregiving within the sandwich generation. Caregivers employ this strategy as a means to attain emotional equilibrium while confronting the inherent challenges of their caregiving responsibilities. It reflects the resourcefulness of caregivers in managing the emotional aspects of their caregiving journey.

Given that the caregiving situation can often be physically and emotionally draining, marked by its unpredictability, caregivers find it essential to seek opportunities for emotional release. Expressing their feelings through means such as crying, writing, or engaging in artistic endeavors can provide caregivers with a pathway to achieve peace of mind and maintain their emotional well-being. Some participants, like participant No.18, do not have the opportunity or conditions to share their negative feelings with others. They lack supportive and receptive individuals to express and vent their emotions.

Participant No. 18:

*"I sometimes bring my son to this rehabilitation center for classes. Our commute to and from the center is by bus. Sometimes, when I'm not feeling well mentally, I cry at the bus stop. I don't have a room at home where I can sit alone for an hour. That's why I wear a mask at the bus stop and cry. This is how I release my emotions."*

This quote illustrates the emotional and physical challenges faced by Participant No. 18 in caring for both her child and parents. Due to the lack of private space and stressful conditions at home, she seeks places where she can find emotional relief. Crying at the bus stop, as a strategy to cope with stress and negative feelings, highlights her efforts to maintain emotional balance in a situation where she cannot find privacy at home.

### **Engaging in favorite activities**

Self-soothing by doing favorite things as a solution in the caregiving process includes engaging in activities and hobbies that bring joy, peace, and a sense of pleasure to caregivers. Reading, listening to music, and attending in favorite classes are some examples of sandwich



generation caregivers' favorite activities that help them to be distracted from the stressful factors related to caregiving.

Participant No. 15 explained:

*I myself like listening to music. When I feel bad, I put on handsfree, sit on the balcony outdoors and listen to my favorite music to relax... I listen to music, read books....*

Participant No. 15 gave time to herself. She looked for activities that she had to do on her day to day basis and infused her with an element of relaxation. These activities are not complex, and the sandwich generation caregivers can do it in a short time and have access to the minimum necessary facilities to perform that activity (like a handsfree).

Participant No. 17 found the opportunity to go out and spend time with friends thanks to support from her sister, who helped with the care of their mother.

*"My sister comes twice a week to assist me with caring for our mother. Since our mother's condition worsened and she needed to be taken outside in a wheelchair, my brothers have not visited. When my sister comes, she helps with feeding and bathing our mother, and I get the chance to go to the park and talk with my friends."*

This participant was a caregiver for a mother who, due to a stroke, required 24-hour care. Spending time in the park and talking with friends are activities the participant enjoys, offering a few hours away from the caregiving environment and its associated pressures, which helps improve their mood and energy.

### **Diversifying responses to needs**

Sandwich generation caregivers provide care services to family members with unique needs placed within the family environment. Consequently, depending on the age of these family members, they may present varying challenges and demands. As a result, caregivers within the sandwich generation often experience significant caregiving pressures. To effectively respond to these pressures, it becomes imperative to employ suitable strategies that can help alleviate the burden of care. These response methods can range from assuming full responsibility for caregiving duties to delegating some tasks to other family members, establishing priorities, or serving as mediators to coordinate care effectively. In the following, the ways of responding are explained by providing relevant quotations.

### **Transferring responsibility to the family members**

This concept means entrusting certain tasks and decisions to older people who are still capable of independent management. Allowing the older adults to take on specific tasks empowers them to make decisions and manage some parts of their lives, strengthens their self-esteem and dignity, and prevents unnecessary dependency of the older adults. Sometime the sandwich generation caregivers involve their spouses, children, and others (e.g., their sisters and brothers) to do some responsibilities. The division of responsibilities reduces the burden of care and ensures that neither party is under pressure. Participant No. 3 was taking care of an elderly mother who had previously suffered a stroke and was currently in a physical condition where she couldn't independently perform daily life activities. Due to a sense of responsibility, the participant had taken over all the personal affairs of the older adult, leading to the older adult becoming completely dependent physically. Therefore, to empower the older adult, some of the caregiving responsibilities were delegated to her. Additionally, by using this strategy, the burden of sandwich generation caregiving responsibilities was reduced.

Participant No.3:

*"I leave the washing to my mom, it helps to keep her active... because for a while I was doing all the work myself and this caused her functional abilities to decrease."*

Some participants were providing care to older adults who were physically and mentally independent. Therefore, they delegated some responsibilities, such as taking care of the children to these older adults.

Participant No. 8:

*"My son is four months old. When I go to work, I leave him with my mother. She feeds him. My son is still very young and doesn't understand much, but he needs me. He cries and needs someone to change his diaper and bathe him. My mother takes care of these things; she supports me."*

To prevent conflicts between caregiving and work responsibilities, participant No. 8, tried to utilize the support and assistance of her mother in taking care of her child. Her mother was physically capable of looking after her grandchild. This strategy had helped the caregiver so that when she was away from home, wouldn't worry about her child and wouldn't face disruptions in her work-related matters. Also, she mutually took care of her mother and lived with her under the same apartment so that her mother would not live alone.

In addition to the older adults, some caregivers also benefited from the support and assistance of their children in managing caregiving and household tasks.

Participant No. 10:

*“When my children are not inclined to eat with us or help with chores, I tell them to come and take the pot whenever they want and eat. I don’t serve them. They prepare breakfast for themselves and make whatever they like to eat. That’s why my situation is better now.”*

At the beginning of multi-generational living arrangement, participant No.10, had tried to take care of all matters themselves to ensure that none of the family members would become upset. However, over time, she concluded that she should delegate matters related to her children to themselves. This strategy reduced her responsibilities significantly.

#### **Prioritizing needs for responsiveness**

This concept includes the assessment and ranking of the different needs and demands of the care situation in order to allocate time, resources and attention effectively. This strategy recognizes that not all needs are of equal urgency and importance and aims to ensure that the most critical needs are addressed immediately and comprehensively. For example, participant No. 18 noted:

*While someone who is very angry, I take care of his needs first. My wife is usually the angriest. If I respond to my mother’s needs first, there will be a big fight. He doesn’t say anything to my mother, but he fights with me. That’s why I pay attention to him first. I will answer my daughter later. My son is unable to speak. There is no problem if he waits for 10–15 min. After my daughter, I respond to my mother’s needs. There is nothing wrong with my son, he is sitting and can wait for a while.*

Participant No. 18 prioritized her family members’ needs based on their previous reactions. She analyzed her family members’ tolerance and patience levels and decided how to respond their demands.

Sometimes participants responded to the needs of her family members based on age and level of their dependency to care.

Participant No. 16:

*“My daughter tells me to come and play with her... On the other hand [and at the same time], my mother asks me to come and calm down my son or check her blood pressure... My daughter likes me to be with her and play all the time, or she wants me*

*to watch cartoons with her... I prioritize my mother because she can’t wait. I tell my daughter to wait until I take care of my mother first.”*

The participants found themselves in situations where all family members simultaneously had requests from them. Due to her mother’s illness and lack of patience and tolerance in meeting her own needs, participant No.16 initially addressed the older adult’s needs and communicated with her child about this matter.

#### **Utilizing available community services**

Caregivers often rely on local resources, organizations, and support systems to assist in providing care and meeting the needs of their dependents. In Iran, various services are available, including daycare facilities, nursing homes, and formal in-home nursing care. The utilization of these services can significantly enhance the well-being of caregivers. However, despite the diversity of services in Iran, barriers such as financial constraints, geographical distance, and a lack of awareness about their availability can impede caregivers’ access to these valuable resources.

Participant No.10:

*So far, I have not been able to convince myself to get a nurse for her. But now my hands and feet are hurting, my neck and back are also hurting. If my condition gets worse, I will get a nurse for her. Of course, both the nurse and myself will take care of my mother.*

The participant has encountered physical difficulties due to the physical dependency of the older adult. So, she thinks about employing a nurse at home to reduce the caregiving burden.

Participants reported the use of social services to empower the older adult and reduce caregiving responsibilities. For instance, participant No.1 noted:

*“My mother couldn’t independently get out of bed. She had bedsores for a month. A physiotherapist came to the house and worked with her. Now my mother walks with a walker but still wears diapers. She used to have urinary incontinence due to a medical condition that required her to take a medication. That medication caused this issue. I work from morning until afternoon, so after a month, I hired a formal caregiver for my mother to take care of her. Since then, my situation has improved.”*

#### **Mediating to reduce conflict**

Mediation involves prioritizing tasks and responsibilities based on urgency and available resources. It can also

be said that the sandwich generation creates a balance between caring for older parents and supporting their children by mediating. Using this strategy, caregivers can create an environment where all family members feel supported and understood.

Participant No. 13:

*I calm myself down by talking. I try to act so that there is peace at home. When my wife fights with her mother, I try to calm him down by talking. I don't try to start a fight at home or make my wife argue more with his mother.*

Conflict among multi-generational family members is not uncommon. Mediation was an effective strategy for caregivers.

#### **Remote monitoring of the older adult**

This concept refers to the use of modern technology and remote monitoring systems to provide caregivers with a way to remotely monitor and support the well-being of the older adult. This approach includes the use of various communication tools, such as smart cell phones, to ensure the safety, health and comfort of the older adult.

Participant No. 9:

*"My mother is distracted and forgets when to take her pills, so when I am at work, I call her or my son and remind her when to take pills."*

The results of this study indicate that sandwich generation caregivers use various methods to cope with the challenges of simultaneously caring for elderly parents and their own children. Data analysis revealed that some caregivers seek to distance themselves from the caregiving situation to alleviate the associated psychological stress. Additionally, self-soothing techniques, such as Spiritual and religious practices and engaging in favorite activities, help them reduce emotional strain. Furthermore, caregivers employ strategies like delegating responsibilities to family members and utilizing community services to improve their situation and alleviate the caregiving burden.

#### **Discussion**

This study identified coping strategies of the sandwich generation by following the principles and process of inductive content analysis [21]. Data analysis has unveiled that certain caregivers employ various strategies to manage the challenges presented by caregiving situations. Through the examination of the data, a total of 10 distinct concepts emerged as caregiving strategies, and these concepts have been categorized into three distinct groupings.

A noteworthy concept that emerged from this intricate caregiving dynamic is the strategy of "Keeping children away from the environment." This concept represents a coping mechanism adopted by certain caregivers to navigate the challenges stemming from intergenerational disparities and conflicts within the caregiving context.

Caring for others can be demanding, and individuals' responses to such situations can vary, encompassing both positive and negative reactions. Caregivers' negative responses may manifest as stress, anger, assigning blame to others, and resorting to avoidance mechanisms [18]. The concept of "Keeping children away from the environment" involves employing an avoidance mechanism when confronted with these intergenerational conflicts. In multi-generational families, varying attitudes, opinions, thoughts, and choices among family members frequently give rise to conflicts. In essence, some caregivers choose to physically or emotionally distance their children from the caregiving environment. This may encompass temporary relocations, setting boundaries, or limiting the involvement of children in caregiving responsibilities. By doing so, caregivers aim to promptly mitigate conflicts and alleviate the strain on family relationships.

Participants who were employed and cared for more individuals often adopted strategies such as delegating responsibilities to family members, utilizing community services, and remote monitoring of the elderly. In contrast, non-employed sandwich generation members and those caring for fewer individuals may resort to mediating strategies, engaging in hobbies, spiritual activities, and distancing themselves from the situation. As the number of dependents increases, sandwich generation caregivers tend to prioritize needs, delegate responsibilities to family members, engage in spiritual activities, and express emotions outwardly while those with fewer dependents tend to focus on mediating, maintaining communication, engaging in hobbies, and participating in spiritual activities to manage their circumstances. Our study found that these strategies are commonly used by employed caregivers who spend several hours away from home. During the COVID-19 pandemic, all caregivers adopted strategies that involved dividing caregiving responsibilities among family members to minimize external contacts and prevent their parents and children from becoming infected.

Additionally, the duration of caregiving impacts the caregivers' proficiency in managing their responsibilities. Participants with longer caregiving experience were more skillful in handling caregiving conditions, while those new to caregiving faced more challenges in managing the situation.

Sudarji et al. (2022) found that sandwich generation caregivers employed strategies of distancing and escape-avoidance, referring to temporarily stepping away from

caregiving situations [14]. In our study, participants acknowledged the challenges of their circumstances and considered distancing themselves. However, their strong commitment to caregiving responsibilities prevented them from stepping away from the caregiving environment.

It is essential to underscore that this avoidance mechanism yields different outcomes in both the short and long term. In the short term, distancing children from the environment can offer immediate relief from conflicts, reducing stress and tension within the caregiving setting. However, these short-term benefits often come at the expense of strained relationships and emotional detachment. In the long term, the consequences become more conspicuous. Removing children from the caregiving context can significantly impact family dynamics, potentially eroding trust and communication between generations. The emotional chasm created by this avoidance mechanism may impede the development of meaningful connections and support structures within the family.

As such, it is evident that “Keeping children away from the environment” represents a complex strategy within the realm of caregiving for the sandwich generation. Caregivers find themselves navigating a delicate balance, striving to address the needs of both their elderly parents and their children while contending with the tensions that arise from divergent perspectives and generational disparities. This concept underscores the multifaceted nature of caregiving decision-making within this unique family context.

Another category of strategies was diverse approaches to meeting needs. The strategy of releasing responsibilities identified in Evans et al.'s study (2016) aligns with the strategy of transferring some responsibilities to family members obtained in this study [10].

Another strategy employed by the caregivers in our study is the utilization of community-based services to address the care needs of their family members. In Iran, a range of services, including day care centers for the older adults, kindergartens, home care services, as well as online and face-to-face consulting services, are available to support caregivers in meeting their responsibilities. Community-based services enable remote monitoring through telephone and video calls with parents and children, facilitating effective remote supervision. These services play a critical role in alleviating the burden on caregivers while simultaneously ensuring that the needs of both older parents and children are adequately met.

While the mere existence of these services is significant, accessibility is equally crucial. Numerous obstacles can hinder caregivers from fully accessing and deriving benefits from these services. These barriers include deficiencies in healthcare and caregiving systems, insufficient awareness, unsuitable services, transportation

constraints, and a shortage of specialized providers [24, 25]. Some caregivers may be hesitant to choose and use services due to concerns about their quality. Implementing quality assurance measures and certification can instill confidence in caregivers. In previous studies, it has been identified that sandwich generation caregivers use strategies such as seeking help, practical assistance-seeking, and meeting with a social worker to reduce their caregiving burden [25, 26]. Recognizing the profound impact of using these services on the lives of caregivers and their family members, it is imperative to take steps to reduce or eliminate these barriers to access: public awareness raising, subsidized services, transportation assistance, expansion of service coverage and respite care.

By addressing these accessibility challenges and enhancing the availability and affordability of community-based care services, policymakers and service providers can play a pivotal role in supporting caregivers in their vital roles while simultaneously improving the quality of life for older parents and children in multi-generational families. This, in turn, can lead to the removal of a significant caregiving burden.

The utilization of problem-solving skills and self-care techniques among caregivers of the sandwich generation plays a pivotal role in their ability to effectively navigate the intricate demands of caregiving. These skills are invaluable assets that enable caregivers to surmount the challenges and stressors associated with tending to both aging parents and their children.

Caregivers in the sandwich generation frequently contend with an array of caregiving duties and responsibilities. Problem-solving skills empower them to assess situations, pinpoint pressing needs, and judiciously prioritize tasks. This, in turn, facilitates the efficient allocation of time and resources. Moreover, these problem-solving abilities prove effective in amicably resolving conflicts, fostering improved communication, and preserving family harmony [24–26]. Given that the caregiving landscape can swiftly evolve due to the changing needs of aging parents and children, caregivers equipped with robust problem-solving skills can readily adapt, adjusting care plans and strategies as necessary. Thus, acquiring problem-solving skills is important in enhancing the caregiving process.

Caring for two generations simultaneously can be extremely challenging. Self-care skills, such as stress management techniques like meditation, exercise, or seeking emotional support, were identified as vital coping mechanisms in this study to assist caregivers in managing emotional and physical caregiving pressures. Self-care necessitates the establishment of clear boundaries to prevent burnout. Caregivers must learn to decisively set aside additional responsibilities when necessary and prioritize their well-being to ensure they preserve

the necessary emotional and energy reserves for effective caregiving.

A pivotal self-care skill is the ability to discern when and how to seek help. Caregivers should not hesitate to enlist support from family members, friends, or professionals when required. Self-care skills also empower caregivers to build emotional resilience, enabling them to navigate complex emotions such as grief and guilt. Frequently, caregivers tend to neglect their own health while tending to the needs of others. Self-care encompasses regular check-ups and prompt attention to any health concerns to preempt caregiver burnout. The concept of “self-soothing” encompasses self-care strategies employed by sandwich generation caregivers, with various relaxation methods. Caregivers who look after one elderly person and one child, or those who are not employed, typically have more time to dedicate to themselves and use strategies such as engaging in activities they enjoy to recharge. Self-soothing through emotional release, social interaction, and spiritual practices is common across all groups of sandwich generation caregivers. However, the frequency and quality of these methods vary among them. This concept has previously been referred to in earlier studies as self-care strategies, methods for maintaining health and well-being, and strategies for sleep and relaxation. The personality traits of caregivers influence their coping styles in response to stressful and challenging situations [9, 27].

In summary, sandwich generation caregivers need problem-solving skills to make informed decisions, and adeptly manage conflicts. Additionally, self-care skills are indispensable for sustaining well-being, averting burnout, and ensuring the sustained provision of high-quality care for both generations. Striking a balance between these skills is paramount for the endurance of caregiving responsibilities and the overall health and well-being of caregivers themselves. Recognizing the significance of these skills and proactively seeking support or training to fortify them can significantly benefit caregivers in the sandwich generation and the entire family unit.

This study delves into the coping strategies employed by sandwich generation caregivers in Tehran, Iran, who manage the dual responsibilities of caring for both elderly parents and their own children within the same household. Unlike the study by Rayanpour et al., which focused on caregivers in Shiraz during the COVID-19 pandemic, our research highlights several key differences.

Our study was set in Tehran, a multicultural city, which allows for a broader examination of caregiving strategies influenced by diverse cultural contexts, unlike the culturally homogeneous environment of Shiraz. Additionally, while Rayanpour et al. identified caregivers based on their involvement with two generations without specifying cohabitation, our research specifically targets those

living with both elderly parents and children under one roof. This focus on cohabitation introduces unique challenges and coping strategies not extensively studied before.

Moreover, our research covers the entire caregiving process, extending beyond the COVID-19 period. This broader perspective provides a more comprehensive understanding of how sandwich generation caregivers manage their responsibilities across different contexts, not just during the pandemic.

By examining the lived experiences of caregivers in shared households and across various caregiving phases, this study offers new insights into the challenges faced and the strategies developed to handle the dual pressures of caregiving for elderly parents and children.

Looking ahead, future research could explore the longitudinal impacts of coping strategies used by sandwich generation caregivers, examining how these approaches evolve over time and their long-term effects on family dynamics and caregiver well-being. Additionally, studies could investigate the effectiveness of specific community-based services and self-care interventions in alleviating the caregiving burden, particularly in different cultural contexts. Research into the role of technology in supporting caregiving, such as through remote monitoring could also offer valuable insights. Finally, exploring the unique challenges faced by caregivers in varying employment statuses or those with different caregiving responsibilities could further enrich our understanding of this complex phenomenon.

#### Limitations

This study was carried out during the COVID-19 pandemic. Consequently, some participants were unable to engage in face-to-face interviews. The caregivers deeply worried about children and older adults' infection. Therefore, interviews with the older adults and children were not feasible.

The challenges of caregiving during the COVID-19 pandemic were the participants' most recent experiences, potentially causing them to focus primarily on these. To address this limitation, the interviewer actively encouraged participants to also reflect on their experiences before the pandemic.

Although the study aimed to include both men and women of the sandwich generation, field experience revealed that the majority of caregiving responsibilities fell on women. Despite actively seeking male sandwich generation caregivers, none were introduced to us, and as a result, we were unable to conduct interviews with this group.

We endeavored to incorporate maximum diversity into our research and eighteen caregivers from the sandwich generation were interviewed (all of whom were women



aged 31 to 60 with the duration of their caregiving ranged from 6 months to 228 months). Such diverse samples among the 18 cases, may affect the transferability of our findings. They were questioned about the strategies they employed in caring for both the elderly and children. Those with longer experience were able to utilize a wider range of strategies in more diverse situations. Conversely, those with shorter durations of experience may have faced fewer challenging situations and employed more limited strategies.

Our primary data collection method, the semi-structured interview, is invaluable in qualitative research, yet it presents inherent limitations. The interviewer's biases can influence the interview's direction and the interpretation of responses, potentially compromising research validity. Additionally, interviewer characteristics like gender or ethnicity may sway participant responses, leading to biased or withheld information. To address these challenges, the interviewer underwent rigorous training to mitigate bias and ensure consistency. Clear protocols were established to enhance data reliability, and reflexivity was encouraged throughout the research process. Regular team meetings facilitated reflection on biases and assumptions. Transparency was prioritized through participant validation of transcripts and findings and comprehensive documentation of the research process, promoting study reproducibility.

Member checking was employed to bolster the credibility and trustworthiness of our study findings. Participants were provided with interview transcripts, summarized data, and extracted themes for their review, feedback, and validation. When participants identified discrepancies between the transcriptions, data summaries, or findings and their own experiences, they offered additional explanations to the interviewer and based on these explanations, the discrepancies were resolved.

We included participants with varying demographic characteristics, such as employment status, duration of caregiving, and the number of people they cared for. However, because our study was conducted using qualitative methods, we were unable to compare different groups of sandwich generation caregivers based on these demographic characteristics. More studies in this regard are needed.

## Conclusion

This study identified three primary coping strategies used by sandwich generation caregivers: diversifying responses to needs, self-soothing, and distancing from the situation. These strategies reflect the complex balancing act of caring for both children and elderly parents. Healthcare professionals and social support organizations should develop targeted interventions to address the unique challenges faced by the sandwich generation.

This includes providing mental health and financial supports and counseling services tailored to their needs to alleviate some of their burden.

Policies should recognize and support the dual caregiving roles of the sandwich generation. This could involve workplace policies offering flexible hours and family leave, as well as government programs providing financial assistance and resources for caregivers. The services provided to caregivers should be tailored to their specific caregiving circumstances, such as the number of dependents they care for, the caregiver's employment status, and the duration of their caregiving involvement.

Addressing these unique challenges will help create a more supportive environment, promoting the well-being and resilience of sandwich generation caregivers. Future studies may explore the long-term effects of caregiving on the health and well-being of the sandwich generation.

## Acknowledgements

We would like to express our gratitude for the collaboration and support extended by Rofeideh Rehabilitation Hospital, Sharif Charitable Philanthropists Institute, Values Revival Institute, Deputy of research and technology and Iranian Research Center on Aging throughout the research process.

## Author contributions

H.P. collected the data, and contributed in data analysis, and drafting and revision of the manuscript, M.M. was involved in conceptualization, data analysis, drafting and revision of the manuscript, Y.A.M. contributed in conceptualization, data analysis and revision of the manuscript, K.A. was involved in conceptualization of the study and revision of the manuscript.

## Funding

This research received no funding.

## Data availability

The datasets generated and/or analyzed during the current study are not publicly available due to confidentiality concerns but are available from the corresponding author on reasonable request.

## Declarations

### Ethics approval and consent to participate

This study has received approval from the Ethics Committee of the University of Social Welfare and Rehabilitation Sciences (IR.USWR.REC.1400.236). Informed consent was obtained from the participants prior to the interviews. All participants were fully briefed on the research's subject, objectives, methods, and their right to withdraw at any time. Some potential participants opted out after receiving this information, but none who joined the study withdrew. They were informed that no compensation was available, but results would be shared with them upon request. Participants' voices were recorded with their permission and to ensure confidentiality, participants were assigned codes and identifying information was not reported. No vulnerable cases were encountered.

### Competing interests

The authors declare no competing interests.

Received: 11 October 2023 / Accepted: 8 October 2024

Published online: 04 December 2024

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