

RESEARCH ARTICLE

Health and Caregiving Stress Among Custodial Grandparents in Rural China

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ABSTRACT

Custodial grandparent families have become common in increased proportion to the old age of the global population. A large percentage of grandparents in rural China have full-time caregiving responsibility due to migration, disease, or death of parents. This qualitative case study examines the health mandates and care-related stresses in custodial grandparents who are working in de-resourced rural settings. The sample was a group of fifteen grandparents (57 to 90 years) who gave primary care to the grandchildren (aged 3 to 16 years). The semi-structured interviews on data collection were then analysed by thematic analysis as supported by the Dual ABCX Model. Three themes were identified that were all intertwined, namely: (1) physical health struggles, (2) emotional distress and grief, and (3) caregiving role strain. Results show that caregiving stress builds up and is guided by various elements that comprise aging, unresolved loss, resource constraint, and high cultural demands of family responsibility. Declines in physical health and emotional burden and care giving demands are not independent problems because over time, they interrelate to limit adaptive capacity in grandparents. The study highlights the necessity of culturally responsive policy and social work intervention, including easy access to healthcare, referring to grief support and respite services, to well serve the rural custodial grandparents.

Keywords: Caregiving; China; Custodial grandparents; Physical and emotional stress; Caregiving role strain

1. Introduction

The aging of the global population has brought renewed attention to grandparents as central figures in family caregiving. In China, this trend is especially pronounced. Over 80% of adults aged 55 and above are grandparents, and more than half are actively involved in raising their grandchildren^[1]. Among these, many grandparents act as full-time caregivers in the absence of biological parents, taking on the role of custodial grandparents^[2-4]. This shift reflects both demographic change and structural pressures, such as rural labor migration, economic inequality, and family fragmentation.

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Custodial grandparents often step into parenting roles due to a range of circumstances, including parental illness, death, disability, or incarceration^[5]. In Western contexts, similar caregiving roles often arise due to parental addiction or legal incapacity^[6, 7]. However, the Chinese context is shaped by distinct cultural expectations, rooted in Confucian ideals of filial duty, intergenerational solidarity, and sacrifice for family legacy^[8, 9].

While the presence of grandparents in family life is often viewed positively, custodial grand parenting places older adults under prolonged stress^[10]. This includes physical burdens and deep emotional strain, often complicated by financial hardship^[11]. These issues are especially acute in rural areas, where healthcare access, social support, and caregiving infrastructure remain limited^[12, 13]. Despite these challenges, rural custodial grandparents remain under-researched, especially in navigating stress over time^[14].

This study adopts the Dual ABCX Model^[15] as a conceptual lens to explore these questions. The model frames how families cope with crisis by considering the accumulation of stressors (aA), availability of internal and external resources (bB), family perceptions of those stressors (cC), and their adaptive outcomes (xX). By applying this model to the lived experiences of custodial grandparents in rural China, this study aims to examine how caregiving and health-related stress intersect and evolve in a structurally constrained, culturally specific context.

Although the concept of custodial grand parenting has been widely studied in Western settings, the scientific studies related to the rural China situation have been majorly focused on uncovering the stressors of caregiving, where little focus has been given on the relationship of stress dynamics of time and explanation.

This paper attempts to fill three existing gaps in the available literature. First, it foreshadows rural custodial grandparents, a group that is not well-studied, but that suffers compounded disadvantages due to the vulnerability of old age, displacement due to migration, and institutional forms of vulnerability. Second, the investigation goes beyond the descriptive representations of burden to conceptualize the stress of caregiving as the cumulative, dynamic process with a mediating role of intersecting stressors, resources, and culturally dominant conceptions of duty. Third, the findings complement existing theoretical perspectives by showing the ways in which the idioms of cultural silence of grief and obligation alter pathways to adaptation, thus, bringing about endurance rather than recuperation. In this regard, the study provides not only an empirical addition to the existing body of rural care giving studies in China but also a subtle enhancement of the family stress theory to non-western contexts.

2. Background of study

2.1. Custodial grand parenting in comparative research contexts

Custodial grandparenting—where grandparents serve as the primary caregivers for grandchildren in the absence of parents—is a global phenomenon that has drawn scholarly attention across diverse contexts^[16]. In North America and parts of Europe, research often frames this arrangement as a response to family breakdown, including incarceration, addiction, mental illness, or state intervention in cases of child neglect^[17, 18]. These studies focus on psychological stress, financial insecurity, and legal vulnerability, highlighting formal kinship care programs to support such families.

By contrast, scholarship in Asia and the Global South has taken a different lens. In countries like China, Vietnam, and Indonesia, custodial caregiving frequently arises not from legal crises but large-scale socioeconomic shifts, most notably, rural-to-urban labour migration. Parents may still be alive and engaged economically in these cases, but physical separation leads to intergenerational caregiving arrangements. This

literature often emphasizes structural causes and cultural obligations, such as the enduring influence of filial piety, gendered caregiving expectations, and the weakening of multigenerational co-residence systems.

While both streams of research have deepened our understanding of custodial caregiving, they tend to work within different conceptual and policy environments. Western studies are often grounded in discourses of legal guardianship, trauma, and systemic service gaps, whereas Asian contexts call for interpretations rooted in social structure, moral responsibility, and informal labour. However, despite these differences, both highlight the layered pressures faced by grandparents who step in as primary caregivers. They often face age-related health issues^[19, 20] and experience caregiving stress^[21]. Moreover, they receive insufficient recognition, lack access to adequate resources, and have limited opportunities to express their concerns^[22, 23].

This study builds on those insights by turning toward rural China, where custodial caregiving is widespread yet undertheorized. In these settings, grandparents are not only responding to structural change but also negotiating cultural expectations, health decline, and emotional isolation.

2.2. Rural grandparenting and cultural expectations in China

In rural parts of China, grandparents often become full-time caregivers not because of a single crisis, but because of long-term social and demographic shifts^[24]. One of the most common reasons is labour migration: younger adults move to cities for work, leaving their children behind^[25, 26]. In other cases, caregiving responsibilities fall to grandparents after a parent becomes ill, passes away, or disengages from family life^[27]. In such situations, stepping in is rarely debated—it is expected. The logic behind this expectation is shaped by cultural ideals like filial piety and family continuity, which hold particular weight in rural communities^[28].

The reality, however, is that caregiving under these circumstances can be exhausting. Many rural grandparents are in poor health themselves, coping with conditions like arthritis, heart disease, or declining mobility, all while taking on the physical and emotional labour of raising a child. The toll is especially heavy for women, who often bear the bulk of caregiving tasks. However, grandparents rarely describe their situation in terms of hardship. Instead, caregiving is framed as something natural—an obligation, a moral duty, sometimes even a way of restoring family order after disruption. Pattern are “cultural endurance”: an ethic of quiet persistence that leaves little room for seeking help or naming the costs.

In many families, caregiving extends far beyond young grandchildren. Grandparents may also be looking after a disabled spouse, an adult child with a chronic illness, or managing a household in economic precarity. However, in most rural areas, there is little formal support. Healthcare access remains limited, mental health resources are scarce, and social services rarely reach multigenerational families outside major cities^[29]. The work is often done alone, with few breaks and even fewer acknowledgments.

These circumstances suggest that caregiving in rural China is not simply about parenting children—it is about holding families together in the absence of broader safety nets. To understand this kind of caregiving, looking at stress levels or outcomes alone is not enough. It requires a framework that can speak to the cultural meaning of care, the emotional labour involved, and how older adults quietly adapt over time.

2.3. Gap in the literature and theoretical positioning

Much of the existing research on custodial grandparenting focuses on identifying stressors—poor health, financial strain, and social isolation—and documenting their impact on caregivers. While these studies are valuable, they tend to treat caregiving stress as a static outcome: something that can be measured, categorized, and compared. What remains less explored is how grandparents make sense of these challenges over time—how they internalize, negotiate, or adapt to caregiving in ways shaped by their cultural and social environment^[30].

This absence is especially notable in studies of rural caregiving in non-Western contexts. In China, where family responsibility is often emphasized over individual needs, grandparents may not express stress in direct or measurable ways. Instead, they may reinterpret hardship as part of their duty or reframe suffering as morally meaningful^[31]. These emotional and cognitive processes are rarely addressed in studies that rely on Western conceptualizations of stress and coping. As a result, we are left with an incomplete picture of what caregiving feels like for those who perform it every day, often without formal recognition or support.

To help fill this gap, this study draws on the Dual ABCX Model, initially developed by Hill (1958)^[32]. The model provides a helpful way to think about caregiving as a dynamic process—one that evolves as new stressors accumulate (aA), resources shift (bB), and family members interpret their roles in changing ways (cC). Adaptation (xX), in this framework, is not simply about returning to balance but may involve redefining expectations, scaling down personal needs, or finding emotional meaning under challenging circumstances.

Although this model has been applied to various caregiving settings in the West³³, it has rarely been used to examine rural caregiving in China. The cultural framing of responsibility, silence around grief, and lack of external support present conditions that differ substantially from those assumed in most Western caregiving literature. This study uses the Dual ABCX Model not as a fixed template but as a flexible lens to explore how grandparents in rural China navigate the psychological and structural weight of caregiving under conditions shaped more by obligation than by choice.

3. Theoretical framework

The Dual ABCX Model of Family Stress and Adaptation guides this study. Formulated initially to understand how families respond to crisis over time, the model provides a dynamic framework for analysing the interaction between stressors, coping resources, cultural meanings, and eventual adaptation. The model includes four key components:

-aA (Accumulating Stressors): These refer to the initial event and the piling up of related stress over time. In this study, stressors include health deterioration, emotional grief, and the daily demands of caregiving.

-bB (Resources): Resources can be internal (such as personal resilience or family relationships) or external (such as government aid or community services). These resources' availability—or absence—shapes how grandparents cope with caregiving stress.

-cC (Perceptions): This refers to how individuals and families interpret their situation. In rural China, cultural beliefs about duty, sacrifice, and family continuity play a central role in shaping how custodial grandparents view their caregiving role.

-xX (Adaptation): This represents the outcome of the family's coping process. Adaptation may be positive (resilience, meaning-making) or negative (burnout, isolation), depending on the interaction of the previous three elements.

This model is especially relevant to this study for several reasons. First, it captures the long-term and layered nature of caregiving stress experienced by elderly caregivers. Second, it integrates structural limitations (e.g., lack of healthcare or income) and cultural expectations (e.g., filial piety, gendered caregiving roles). Third, the model encourages attention to process, not just outcomes—aligning well with the qualitative approach of this study.

By applying the Dual ABCX Model, this research offers a structured yet flexible lens for understanding how custodial grandparents in rural China make sense of, respond to, and adapt to complex caregiving stress.

4. Method

4.1. Study design

This study adopted a qualitative case study design, allowing an in-depth understanding of custodial grandparents' lived experiences in their real-world context. A case study approach was particularly appropriate when the focus is on exploring complex social processes, such as caregiving stress and family adaptation, within a bounded system^[34, 35]. The decision to use a qualitative method aligns with the theoretical orientation of this research, which is grounded in the Dual ABCX model.

The research was conducted in Pingyin County, a rural area in Shandong Province characterized by an aging population, high rates of outward labour migration, and limited access to public caregiving services. This setting reflects many structural challenges custodial grandparents face in China's under-resourced regions.

4.2. Sampling

Informants were selected through purposive sampling, collaborating with a local social work service centre and the Civil Affairs Department. The selection criteria were as follows: Grandparents aged 55 or above, providing primary, daily care to at least one grandchild under 18, having lived with the grandchild for over six months, and not receiving income from formal employment. A total of 15 custodial grandparents were interviewed. Sampling continued until data saturation was reached^[36, 37].

4.3. Data collection

Data were collected through semi-structured, in-depth interviews, allowing flexibility for informants to share experiences in their terms while also maintaining focus on key research themes^[38]. Interviews were arranged by social workers and conducted in informants' homes to ensure comfort and familiarity.

Each interview lasted between 50 minutes and 2 hours. All informants were briefed on the research purpose, confidentiality measures, and their right to withdraw. Written informed consent was obtained prior to each session. Interviews were conducted in Mandarin Chinese by the principal investigator, a licensed social worker with cultural and linguistic fluency. This background helped build trust and ensured sensitivity to local norms and expressions.

All interviews were audio-recorded and accompanied by researcher field notes. In addition, demographic data (age, gender, caregiving context, family composition) were collected to support contextual interpretation. Moreover, all names used in this study are pseudonyms assigned to protect participants' confidentiality.

4.4. Data analysis

The recorded interviews were transcribed verbatim in Chinese, and transcription accuracy was checked by comparing audio with text, particularly for dialect-specific expressions. Transcripts were then translated into English, preserving the semantic integrity of the original narratives.

Data were analysed using thematic analysis as outlined by Clarke and Braun (2016)^[39], following six iterative steps: familiarization, initial coding, theme generation, theme refinement, theme definition, and report writing. The coding process was conducted with NVivo 12 Plus software. The research team held

weekly peer debriefing sessions to enhance reliability, discuss codes, resolve inconsistencies, and validate emergent themes.

Notably, the Dual ABCX Model served as a theoretical frame and a coding guide: stressors, resources, perceptions, and adaptation were treated as sensitizing concepts during the coding phase. This dual-layered approach allowed both inductive emergence of themes and deductive alignment with theory.

5. Results

The interviews collected data from 15 custodial grandparents, including five grandfathers and 10 grandmothers. The oldest was 90, and the youngest was 57, with an average age of 67. Six had no spouse and raised their grandchildren alone; two were grandfathers. All of them are below primary school level and live in rural areas. Of all 15 informants, the first two were pilot runs to improve the methodology and questions. The interviews obtained in the trial run were all included in the study data. The demographic data of the family is presented in Table 1.

The daily routine in the families of caring differed but was equally intense. Grandparents usually woke up earlier than the time of day to cook food, take children to school, do the household duties and keep a constant attention on them the whole day. The physical demands of care giving were increased in many rural settlements, where transport systems were not accessible, educational institutions were distant, and medical facilities required long travel. The widowed grandparents and those with more than one grandchild reported significantly limited flexibility given the caregiving tasks that allowed very limited rest and socialization or doctor visitation. All these contextual conditions did not only affect the way caregiving practices were done but also the way the grandparents perceived and survived stress.

Table 1. Demographic information of the informants

Pseudonym	Gender	Age	Education	Grandchildren Raised (Number, Gender, Age)	Spouse (Alive/Deceased)	Caregiving Context
Wei	Female	62	Junior high school	1 boy, 15	Alive	Parental death
Yin	Female	69	Never attended school	1 boy, 13	Deceased	Parental death
Lee	Male	68	Primary school	1 boy, 12	Alive	Parental illness/disability
Chong	Male	73	Primary school	1 boy, 7	Deceased	Parental death
Lan	Male	70	Never attended school	1 boy, 13	Alive	Parental migration
Hua	Female	61	Primary school	2 girls, 6 and 11	Alive	Parental death
Lin	Female	90	Primary school	2 girls, 15 and 21	Deceased	Parental migration
Wong	Female	63	Primary school	2 twin boys, 4	Deceased	Parental death
Ling	Female	57	Primary school	1 boy, 9	Alive	Parental migration
King	Female	69	Never attended school	2 children, girl (12), boy (14)	Alive	Parental migration

Pseudonym	Gender	Age	Education	Grandchildren Raised (Number, Gender, Age)	Spouse (Alive/Deceased)	Caregiving Context
Sun	Male	70	Primary school	1 boy, 12	Deceased	Parental death
Wen	Male	68	Primary school	1 boy, 8	Alive	Parental migration
Fen	Female	57	Primary school	1 girl, 13	Deceased	Parental death
Zhou	Female	68	Never attended school	2 children, boy (6), girl (13)	Deceased	Parental death
Meng	Female	59	Never attended school	2 twin girls, 13	Deceased	Parental migration

Table 1. (Continued)

The data revealed three main themes from the interview data (refer to Table 2). These themes are (i) the physical health struggles, (ii) the emotional distress and concerns, and (iii) navigating caregiving demands and role conflicts.

Table 2. The Themes and Subthemes of the Study

Themes	Subthemes
Physical Health Struggles	1. Aging and Chronic Conditions 2. Grief-Related Physical Symptoms
The Emotional Distress and Concerns	1. Persistent Worry and Role Anxiety 2. Grief and Lingering Emotional Pain
Navigating Caregiving Demands and Role Conflicts	1. Caring for Grandchildren and Family Members with Special Needs 2. Balancing Health, Finances, and Household Survival

Theme 1—Physical Health Struggles

Custodial grandparents in rural China face substantial physical health challenges that limit their caregiving capacity and compromise their well-being. Many informants reported long-standing chronic illnesses, physical exhaustion, and grief-related somatic symptoms—all of which intensified under the demands of full-time caregiving.

Aging and chronic conditions

Most informants suffered from multiple chronic illnesses, including cardiovascular disease, diabetes, joint pain, and neurological disorders. These conditions significantly reduced their physical strength, mobility, and energy, making daily caregiving tasks difficult or dangerous.

“I was hospitalized a lot; I had a stroke once. I had high blood sugar, high blood pressure, and thick fats in my blood.” (Informant; Wei).

“I had a heart stent surgery and am currently suffering from arm pain, which makes it difficult for me to comb my hair.” (Informant; Zhou).

For some, illness created a tension between their physical limits and caregiving responsibilities. Despite needing rest or treatment, they prioritized their grandchildren’s needs, often at the cost of their recovery.

“I had a stroke and heart attack, and I was in the hospital, but I came back every day to take care of my grandson.” (Informant; Sun)

“My arm hurts and feels numb. I cannot go to the hospital because I have to look after the child. I just leave it as it is.” (Informant; Chong)

These examples illustrate a core stressor (aA) in the Dual ABCX model: the physical decline associated with aging. When compounded by caregiving demands and the absence of accessible medical care (limited bB), these health issues not only increase vulnerability but also erode the caregiver’s long-term capacity to adapt (xX).

Grief-Related Physical Symptoms

For many grandparents, physical ailments were also linked to prolonged grief following the death of a child or spouse. Somatic symptoms—such as insomnia, chest pain, vision problems, and fatigue—often emerged or worsened after these losses.

“The grief caused my heart attack after my son passed away. His death took my heart away; I was sad and cried every day. One year later, my husband also died, and I almost cried to the point of being blind...” (Informant; Wei).

“Since my son died, I have been crying every day, which caused my eye illness. My eyes hurt and feel uncomfortable as if there is always something in them; it is a nerve issue in the eyes.” (Informant; Hua).

The link between emotional pain and physical deterioration was a common theme. Informants described how sorrow and loss manifested in their bodies, with some saying they felt “hollowed out” or “physically drained” for months or years.

These grief-related conditions highlight how emotional trauma can become a secondary stressor (aA) in caregiving life. In a cultural setting that discourages open grief and expects silent endurance (cC), many grandparents lacked access to emotional support (bB), which compounded their physical decline. The failure to process loss meaningfully impaired their adaptive functioning (xX), reinforcing a cycle of stress and isolation.

Theme 2—The Emotional Distress and Concerns

Beyond physical strain, custodial grandparents in this study experienced profound emotional burdens. Their psychological stress was rooted in unresolved grief, persistent worry, and a heavy sense of duty to keep the family intact. Many described caregiving as a practical task and a moral responsibility that left little space for their own emotional needs.

Persistent Worry and Role Anxiety

Grandparents consistently expressed deep concern for the future of their grandchildren. These worries included academic performance, emotional development, and overall life stability. Often, their anxiety stemmed not just from caregiving demands, but from their belief that they alone were responsible for ensuring the next generation’s success.

“I remember last year, my grandson’s math scores suddenly dropped to 40 points. I was so anxious that I cried several times. If his scores kept like this, I am afraid he would not have a good future.” (Informant; Wei)

In some cases, this worry extended to adult children, especially sons who had lost a spouse or were unable to assume caregiving duties.

“My biggest concern right now is my son. I hope he can remarry. Perhaps remarrying could help him behave more like a normal person and take on the responsibilities of being a father.” (Informant; Wong)

These narratives show a form of emotional hyper-vigilance. Grandparents were not only parenting their grandchildren, but also monitoring the behavior of their adult children, bearing psychological responsibilities across generations. Within the Dual ABCX framework, these concerns reflect perceptual stress (cC)—how caregivers interpret their role and responsibilities. The belief that they must “hold the family together” heightens emotional pressure. In rural Chinese culture, where silence and endurance are valued, grandparents may internalize this stress rather than seek emotional support, thus weakening potential coping resources (bB).

Grief and Lingering Emotional Pain

Many informants carried unresolved grief from the loss of a spouse or child. The emotional aftermath of death, particularly of one’s child, was described as all-consuming. For some years had passed, but the sense of loss remained raw.

“My wife died so suddenly during a heart surgery. It was such a pity that I did not accompany her to the hospital. It feels like a nightmare. I feel so lonely and miserable.” (Informant; Chong).

“My husband has not done any work since our son died. He has no motivation whatsoever. Losing our son makes him feel like life has no value.” (Informant; Hua).

This grief deeply affected their motivation, outlook, and daily functioning. One informant described how the sorrow “took her heart away,” a phrase that suggests more than sadness—an existential loss.

Grief here operates as a chronic psychological stressor (aA). When paired with caregiving duties and the lack of culturally acceptable outlets for emotional expression, it becomes corrosive to mental health. The Dual ABCX model helps explain how unresolved emotional trauma, when unsupported (bB) and internalized through cultural expectations (cC), reduces one’s adaptive capacity (xX).

Theme 3—Navigating Caregiving Demands and Role Conflicts

While custodial grandparents expected to face hardships, many described their caregiving role as far more intense than anticipated. The demands placed on them extended well beyond childcare, encompassing complex health support, emotional labor, and economic sacrifice. These overlapping responsibilities often created role conflicts that strained their physical, emotional, and social limits.

Caring for Grandchildren and Family Members with Special Needs

In several cases, grandparents were not only raising grandchildren but also serving as primary caregivers to disabled family members, such as children-in-law with mental illness or grandchildren with physical disabilities. These roles demanded constant monitoring and physical care.

“My daughter-in-law is mentally disabled. Ever since she was pregnant, I slept with her and watched for her movements. She had miscarried a child once.” (Informant; Yin).

“My grandson has had multiple disabilities ever since birth... He cannot control his bowel movements... If he curled up his legs at night, he could not move the next morning. We must massage him every morning and stretch his arms and legs.” (Informant; Lee)

These care routines were relentless. For some grandparents, daily life resembled that of professional caregivers, but without training, pay, or rest.

These cases reflect complex, compounding stressors (aA) in the Dual ABCX model. Not only are grandparents dealing with aging and grief, but they also navigate medicalized care without institutional support. The absence of respite services or health aides (bB) forces them into highly demanding care arrangements, with little space to recover or reassess their health and needs.

Balancing Health, Finances, and Household Survival

Many informants described a tension between their caregiving responsibilities and their health conditions. Even with illness, they continued caregiving tasks because no one else was available.

“Now that my wife has passed away, I need to take care of my granddaughter all day... I have not worked for seven or eight years. (Informant; Chong).

“I cannot work in the fields because of my heart disease... I do not have enough income to feed the children.” (Informant; Zhou)

“I eat after they leave for school. I cannot even get sick. If I get sick, this family will not be able to survive.” (Informant; Hua).

In these accounts, caregiving displaced their basic survival priorities—income generation, healthcare access, and even food intake. Several grandparents reported delaying or avoiding medical treatment due to caregiving duties.

These quotes reflect the tension between internal family needs and external resource gaps (bB). Without pensions, insurance, or community help, grandparents absorbed all roles: caregiver, provider, and homemaker. Over time, this role convergence contributes to chronic fatigue, emotional blunting, and reduced adaptive capacity (xX).

Loss of Personal Space and Social Life

Many informants described the loss of time for themselves, practically and emotionally. Social activities—such as joining elder clubs or visiting friends—were gradually abandoned, leading to social withdrawal and loneliness.

“I used to join a drum team, but it often clashed with school pick-up, so I quit.” (Informant; Chong)

“I do not often visit my sisters because the kids need me every day.” (Informant; Hua)

For grandmothers especially, caregiving extended to domestic labour—cooking, cleaning, monitoring homework—leaving them without rest or mental relief.

“My daily routine involves cooking, washing clothes, brushing shoes, and cleaning... I have never had proper sleep.” (Informant; Meng)

This loss of social contact and personal identity constitutes a slow erosion of adaptive capacity (xX). When care takes over not just space but selfhood, caregivers begin to disappear into the background of the

family they hold together. In the Dual ABCX lens, the absence of time, rest, or relational balance eliminates opportunities to replenish internal coping resources (bB).

There were also differences in care giving strain among the family situations. It was observed that widowed grandparents always complained of heavier emotional and physical loads because they did not receive any support provided by a spouse, but married grandparents said that the burden of taking care of children was hard but easier when divided. On the same note, grandparents with more than one grandchild or other family members with disabilities tended to have more role overload as compared to grandparents with only one child. These differences demonstrate that the burden of care giving is disproportionate in its distribution thus supporting the significance of family composition and the support offered in its adaptive formation process.

6. Discussion

This study applied the Dual ABCX Model to examine how custodial grandparents in rural China experience and adapt to caregiving stress. Through in-depth interviews with fifteen grandparents, the findings reveal a layered picture of aging, grief, and care responsibilities that interact over time—rather than being isolated problems, health strain, emotional distress, and caregiving overload emerged as interconnected processes—shaped by limited resources, cultural expectations, and an enduring sense of obligation.

6.1. Physical strain as a primary and persistent stressor

The first central theme demonstrated that physical illness is not simply a background condition but a fundamental stressor that undermines custodial grandparents' ability to fulfil caregiving roles. Many informants reported chronic conditions such as hypertension, cardiovascular disease, joint pain, and neurological impairments. Our findings indicate that despite significant health setbacks, many grandparents continue to perform demanding caregiving tasks, often postponing treatment or hospitalization. This self-sacrifice underscores the physical toll of caregiving, where personal well-being is frequently sacrificed at the expense of caregiving duties.

The Dual ABCX framework considers such physical decline a primary stressor (aA), magnified by the lack of accessible healthcare (limited bB). Woods (2021)^[40] similarly note that rural settings exacerbate these challenges due to inadequate medical infrastructure, thereby deepening the vulnerability of elderly caregivers. These conditions are particularly distressing when intertwined with the physical manifestations of grief following the loss of close family members—a phenomenon that resonates with prior work on health deterioration among caregivers (Alavi et al., 2021; Razuan et al., 2023)^[41, 42].

6.2. Emotional distress, grief, and cultural perception of responsibility

The second key finding shows that grandparents carry significant emotional stress, rooted in both anticipatory worry and unresolved grief. They expressed deep anxiety about their grandchildren's future, as well as enduring grief resulting from the death or absence of their children or spouse. In traditional Chinese culture, the death of a child, particularly a son, carries a heavy burden, both psychologically and symbolically, as it disrupts the continuity of the family lineage (Yang & Li, 2009)^[43]. The emotional pain reported in our study—ranging from persistent sadness and worry to a pervasive sense of loss—corroborates findings from Lee and Jang (2019)^[44] concerning the mental health risks among custodial caregivers.

However, our data extend these insights by revealing that cultural norms often dictate silence around grief in rural contexts. In communities where endurance is prized, expressing emotional distress may be perceived as a personal failing, leaving grandparents with few avenues for support (Yang & Lu, 2023)^[45]. This cultural repression of emotion reinforces the concept of perceptual stress (cC) in the Dual ABCX model,

as caregivers internalize their pain without appropriate emotional outlets, further diminishing their adaptive capacity (xX). The literature review and our field data imply that interventions sensitive to cultural and emotional dimensions are urgently needed to address these burdens.

6.3. Role overload and the erosion of selfhood

The third central theme reveals that custodial grandparents face overwhelming role conflicts that extend well beyond traditional caregiving. Many informants reported that their responsibilities included raising grandchildren and caring for disabled adult children or other vulnerable family members. This multiplicity of roles—encompassing caregiver, household manager, and even de facto provider—leads to what can be termed “identity compression,” where personal needs and individual identity become subsumed under the caregiving role.

The inability to balance self-care with caregiving duties exacerbates financial strain, social isolation, and physical exhaustion. Lee and Blitz (2016) ^[46] have similarly documented that such role conflicts are particularly pronounced in environments lacking formal support, where grandparents are forced to absorb multiple responsibilities simultaneously. Within the Dual ABCX framework, this scenario illustrates how high caregiving demands (aA) and insufficient resources (bB) lead to adaptive suppression. In other words, to maintain family continuity, grandparents may sacrifice their social interactions, personal time, and even health needs, thus slowly eroding their identity and overall well-being (xX).

Anticipating cultural duty and silent suffering, the current work shows that accommodation in rural custodian grandparenting, more often than not, requires long-term self-sacrifice, not reduction of stress, challenging the current paradigms of caregiving based on Western welfare contexts.

6.4. Implication of study

This study using the Dual ABCX Model has key theoretical and practical implications. It shows rural custodial grandparents’ caregiving stress is tied to structural and cultural factors, with the model explaining how stressors, resources, and cultural views shape their adaptation. Without support, they prioritize caregiving over their own needs rather than truly recovering. The study also highlights unique rural Chinese factors like limited resources, and filial piety, showing theories need to fit non-Western contexts.

From a policy and practice perspective, targeted support is needed—including accessible healthcare, grief counselling, respite services, and financial support (Alavi et al., 2016)⁴⁷—while social work must address cultural barriers to help-seeking and respect family narratives. Ultimately, this study amplifies an often-invisible group sustaining families. Recognizing their experiences moves us toward a caregiving system that is both effective and humane.

7. Conclusion

This study explored the caregiving stress and health challenges of custodial grandparents in rural China through a qualitative method guided by the Dual ABCX Model. By examining how elderly caregivers navigate physical decline, emotional grief, and role conflicts in a structurally disadvantaged and culturally loaded setting, the study provides new insight into the lived complexity of aging in caregiving roles. Three key themes emerged from the data. These findings demonstrate that custodial grandparents’ stress is produced not just by caregiving tasks but also by the accumulation of losses, lack of support, and cultural silence around emotional needs. The Dual ABCX Model was applicable in tracing how stressors, perceptions, and adaptation interact over time, particularly in contexts with limited external resources.

Declaration of Statement

The authors confirm that the manuscript is original and has not been published previously, and all research procedures have obtained the necessary ethical approvals.

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Conflict of interest

The authors declare no conflict of interest

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