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A Qualitative Study of the Role of Social Support in Reducing Caregiver Burden among Families of Orthopedic Patients

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A B S T R A C T

Purpose: This study aimed to explore the lived experiences of family caregivers of orthopedic patients and to clarify the role of social support in reducing their perceived caregiving burden.

Methods and Materials: This qualitative study was conducted using a descriptive phenomenological approach. Participants were family caregivers of orthopedic patients hospitalized at the Bone and Joint Reconstruction Research Center, Shafa Yahyaian Hospital, affiliated with Iran University of Medical Sciences. Participants were selected through purposive sampling with maximum variation in age, caregiving role, occupational status, and type of orthopedic condition. Five information-rich interviews were included in the final analysis. Data were collected through individual semi-structured in-depth interviews and transcribed verbatim. Data analysis was performed using Colaizzi's seven-step phenomenological method, including repeated reading of transcripts, extraction of significant statements, formulation of meanings, clustering of themes, development of a comprehensive description, identification of the fundamental structure of the phenomenon, and participant validation. Trustworthiness was ensured using Lincoln and Guba's criteria of credibility, transferability, dependability, and confirmability.

Findings: Analysis resulted in 23 subthemes organized into six main themes: physical and functional burden of caregiving; emotional and psychological vulnerability; financial pressure and disruption of everyday roles; family support and sharing of caregiving responsibility; informational, instrumental, and healthcare-related support; and social connectedness, caregiver recognition, and restorative support. The findings indicated that caregiver burden intensified when physical demands, uncertainty, financial difficulties, family conflict, and social isolation occurred simultaneously. In contrast, emotional reassurance, shared caregiving responsibilities, practical assistance, professional guidance, financial support, companionship, and opportunities for respite reduced the perceived burden and strengthened caregivers' capacity to continue providing care.

Conclusion: Social support plays a multidimensional protective role in reducing caregiver burden among families of orthopedic patients by decreasing physical workload, emotional distress, uncertainty, isolation, and economic pressure; therefore, caregiver-centered support should be integrated into orthopedic care and discharge planning.

Keywords: *Caregiver Burden; Social Support; Family Caregivers; Orthopedic Patients; Descriptive Phenomenology; Qualitative Research*

1. Introduction

Orthopedic diseases, traumatic injuries, fractures, degenerative musculoskeletal disorders, and conditions requiring reconstructive surgery are among the major causes of pain, disability, restricted mobility, and dependency in activities of daily living. Although the clinical management of orthopedic conditions is primarily focused on restoring physical function, controlling pain, preventing complications, and facilitating rehabilitation, the consequences of these conditions frequently extend beyond the patient and directly affect family members who assume caregiving responsibilities. In many healthcare systems, family members provide a substantial proportion of the assistance required during hospitalization, recovery, rehabilitation, and long-term adjustment. This support may include assistance with mobility, personal hygiene, medication management, transportation, nutrition, communication with healthcare professionals, emotional reassurance, and supervision during periods in which the patient is unable to function independently. As a result, orthopedic illness often becomes not only an individual medical event but also a family experience in which caregiving responsibilities are redistributed and relatives must adapt to new physical, emotional, social, and economic demands (Alemu et al., 2025; Longo et al., 2020).

The burden experienced by family caregivers has increasingly been recognized as an important component of the overall impact of musculoskeletal and orthopedic conditions. Informal caregivers frequently perform physically demanding activities without formal training and may be expected to assist with transfers, repositioning, bathing, dressing, toileting, ambulation, and other functions that require considerable physical effort. Such responsibilities are particularly challenging when the patient has severe mobility limitations or when the caregiver is the only person consistently available to provide support. Evidence has shown that informal caregivers themselves may experience musculoskeletal discomfort and physical strain as a consequence of repetitive lifting, bending, prolonged standing, awkward postures, and sustained physical effort. These demands can result in pain, fatigue, and deterioration of the caregiver's own physical functioning, thereby creating a situation in which the health needs of the patient indirectly generate additional health risks for the caregiver (Darragh et al., 2015). More recent evidence has reinforced the multidimensional burden associated with informal caregiving for adults with musculoskeletal conditions and has demonstrated that caregiving consequences extend across physical health, psychological well-being, employment, productivity, social participation, and economic functioning (Alemu et al., 2025).

The challenges of orthopedic caregiving are especially apparent following serious fractures and surgical procedures. Hip fractures, for example, often lead to abrupt changes in mobility and functional independence, particularly among older adults. Family members may have little time to prepare for the caregiving role before being required to participate in discharge planning, rehabilitation, and home-based support. The transition from hospital to home can therefore be accompanied by uncertainty regarding the patient's functional limitations, the safety of movement, fall prevention, personal care, and the expected course of recovery. Caregivers may simultaneously be required to learn new practical skills while managing fear regarding the possibility of complications or further injury. Qualitative evidence from informal caregivers supporting patients following hip fracture surgery has demonstrated that caregiving extends well beyond practical assistance and involves adaptation to uncertainty, disruption of everyday routines, changing family roles, and a need for greater professional guidance and support (Welsh et al., 2023).

Psychological burden represents another important dimension of the caregiving experience. Family caregivers may experience anxiety, worry, helplessness, frustration, guilt, irritability, sadness, and uncertainty while attempting to meet the needs of an injured or functionally dependent relative. These responses may be especially pronounced in the early stages following orthopedic trauma, when prognosis and recovery are uncertain. Caregivers of patients with osteoporotic hip fractures, for example, have been shown to experience substantial stress, particularly in relation to the practical and emotional demands of providing care and adapting to the patient's sudden loss of independence (Siddiqui et al., 2010). Psychological strain can become more persistent when caregiving responsibilities continue for a prolonged period or when the patient has additional chronic health problems. In such circumstances, caregiving may become incorporated into the caregiver's daily identity and routine, gradually affecting emotional well-being, family relationships, employment, and social participation.

The experiences of family caregivers are also shaped by the complexity and chronicity of the patient's health condition. In the context of multiple chronic conditions,

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caregivers may be required to coordinate different treatment needs, monitor symptoms, communicate with several healthcare providers, manage medications, and respond to fluctuating levels of dependency. Qualitative findings among Iranian family caregivers of older adults with multiple chronic conditions have demonstrated that caregivers encounter substantial challenges related to the demands of care, lack of sufficient support, inadequate information, emotional exhaustion, and disruption of personal and social life (Malmir et al., 2022). These findings are particularly relevant to orthopedic care because many orthopedic patients, especially older adults, may have concurrent chronic illnesses or previous disabilities that complicate rehabilitation and increase dependency. Therefore, the burden associated with orthopedic caregiving may be intensified when the family is not merely responding to a single acute injury but is managing a broader pattern of chronic and recurrent health needs.

Caregiving burden also has important implications for caregivers' quality of life. Family members who assume prolonged caregiving responsibilities may experience restrictions in leisure, social contact, occupational activity, and opportunities for rest. They may also face persistent worry regarding the future, particularly when the patient's functional limitations are severe or permanent. Research examining spouses of individuals with chronic spinal cord injury has demonstrated that caregiving can be associated with significant reductions in quality of life and that the impact of caregiving is influenced by a range of personal, social, and contextual factors (Ebrahimzadeh et al., 2013). Although spinal cord injury represents a specific clinical condition, its relevance to orthopedic caregiving lies in the shared issues of mobility limitation, dependency, long-term assistance, and family adaptation. These findings suggest that the consequences of caregiving cannot be adequately understood by examining the patient's disability alone; it is also necessary to consider the caregiver's resources, relationships, expectations, and access to support.

One of the most important factors that may influence the severity of caregiver burden is social support. Social support is a multidimensional construct that may include emotional support, instrumental assistance, informational guidance, companionship, financial help, reassurance, validation, and practical participation in caregiving tasks. The availability of such support can influence how caregivers perceive and respond to stress. When responsibilities are shared and caregivers feel that others are available to assist them, the subjective burden of care may be reduced even when the patient's physical needs remain substantial. Conversely, caregivers who feel isolated, unsupported, or solely responsible may experience greater psychological distress and a stronger sense of burden. Social support can therefore operate both by directly reducing the objective workload of caregiving and by modifying the emotional meaning of caregiving demands.

Empirical evidence supports the importance of social support in predicting caregiver burden. Research has shown that caregivers with stronger social support may experience lower levels of perceived burden and may be better able to adapt to the demands associated with caring for a family member with functional limitations (Rodakowski et al., 2012). Social support may reduce burden through several mechanisms. Emotional reassurance may reduce loneliness and anxiety, practical assistance may lessen physical and time demands, informational guidance may improve confidence in caregiving tasks, and companionship may help caregivers maintain a sense of connection with life beyond the caregiving role. Importantly, the effectiveness of support may depend on whether it corresponds to the caregiver's actual needs. A caregiver who primarily requires help with physically demanding activities may receive limited benefit from emotional reassurance alone, whereas a caregiver struggling with uncertainty may particularly benefit from clear information and professional guidance.

The relationship between social support and caregiver well-being has also been demonstrated in families living with severe mobility-related conditions. Mixed-methods research involving families affected by spinal cord injury has shown that coping resources and social support are closely associated with caregiver well-being and adjustment (Ryerson Espino et al., 2022). These findings indicate that caregivers' ability to maintain psychological functioning is influenced not only by the severity of the patient's impairment but also by the interpersonal resources available to them. Social support may provide a sense of shared responsibility and emotional security, allowing caregivers to interpret difficult circumstances as more manageable. Conversely, insufficient support can intensify feelings of isolation and may contribute to the perception that caregiving demands are overwhelming.

The importance of social support is particularly evident when caregiving involves substantial physical demands. Family caregivers frequently undertake tasks that resemble the physical work performed by trained healthcare workers but without equivalent training, ergonomic knowledge, or access to assistive resources. Research on musculoskeletal

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pain among family caregivers has demonstrated that caregivers may themselves develop significant physical symptoms and that targeted physical interventions can be beneficial in addressing caregiver-related musculoskeletal problems (Montero-Cuadrado et al., 2023). This evidence underscores the need to view caregivers not merely as providers of support but also as individuals who may require health-promoting interventions. Practical family assistance, appropriate education, professional instruction regarding safe handling techniques, opportunities for rest, and access to therapeutic services may all form part of a broader support system capable of reducing caregiving burden.

A systematic review specifically examining family caregiver strain in orthopedic populations has shown that the caregiving experience includes numerous challenges related to physical demands, emotional distress, uncertainty, role changes, practical responsibilities, and the need for adequate information and healthcare support (Longo et al., 2020). Orthopedic caregiving is therefore a complex phenomenon situated at the intersection of patient disability, family relationships, healthcare organization, and social resources. The caregiver may be required to make decisions, coordinate care, manage rehabilitation tasks, and provide emotional support while simultaneously coping with personal responsibilities that existed before the patient's illness. The burden may therefore become especially pronounced when formal and informal support systems fail to recognize the caregiver as an individual with legitimate needs.

This issue is also important because the burden of informal caregiving has implications beyond the household. Contemporary evidence indicates that informal caregiving for musculoskeletal conditions can be associated with productivity losses, reduced workforce participation, personal financial costs, and broader economic consequences (Alemu et al., 2025). Caregivers may reduce working hours, miss workdays, temporarily leave employment, or experience reduced occupational performance because of caregiving responsibilities. Similar disruptions may occur in education, household management, and social participation. For caregivers with limited financial reserves, unstable employment, or responsibility for other family members, even a relatively short period of intensive caregiving may create substantial pressure. Consequently, social support should be understood broadly enough to include financial and institutional assistance in addition to interpersonal support.

The family context is especially significant in societies where informal caregiving is strongly embedded within cultural expectations regarding responsibility toward parents, spouses, siblings, and other relatives. Family caregivers may accept intensive responsibilities because caregiving is perceived as a moral, emotional, or familial obligation. However, the existence of strong family values does not necessarily protect caregivers from burden. Instead, such expectations may sometimes make it more difficult for caregivers to express exhaustion, ask for assistance, or prioritize their own needs. Studies conducted in the Iranian context have highlighted the complexity of caregiving responsibilities and the challenges created by insufficient support, limited resources, and the long-term demands of caring for dependent family members (Ebrahimzadeh et al., 2013; Malmir et al., 2022). In this context, understanding social support requires attention not only to whether family members are present, but also to whether caregiving responsibilities are distributed equitably and whether caregivers feel emotionally recognized and practically supported.

A further issue concerns the role of healthcare professionals and institutions in supporting caregivers. Family members are frequently expected to continue care after discharge, but they may not always receive adequate preparation for this role. Orthopedic rehabilitation may require specific knowledge concerning mobility, assistive devices, positioning, wound care, personal hygiene, exercise, and prevention of further injury. Lack of information can increase caregiver anxiety and reduce confidence. Qualitative evidence from caregivers of patients following hip fracture surgery has emphasized the importance of appropriate preparation, communication, and professional guidance during the recovery process (Welsh et al., 2023). Healthcare professionals can therefore contribute to caregiver support not only by treating the patient but also by assessing caregiver needs, providing clear instructions, answering concerns, and facilitating access to relevant services.

Although caregiver burden has been examined in orthopedic, musculoskeletal, spinal cord injury, and chronic disease populations, much of the existing evidence has focused on measuring burden, stress, physical symptoms, or quality of life through standardized quantitative instruments. Such approaches are valuable for estimating the prevalence and severity of caregiver difficulties, but they may not fully capture how caregivers themselves interpret their experiences or how different forms of social support alter the meaning of caregiving in everyday life. Qualitative research is particularly valuable in this regard because it allows

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caregivers to describe their experiences in their own words and can reveal dimensions of burden that may not be anticipated by predefined questionnaires. Phenomenological inquiry is especially appropriate when the objective is to understand the essential structure of lived experience and to examine how physical, psychological, familial, financial, and social dimensions interact within caregiving.

The need for qualitative investigation is also reinforced by the heterogeneity of orthopedic caregiving. Caregivers may differ substantially in age, relationship to the patient, economic position, family structure, previous caregiving experience, duration of care, and the severity or chronicity of the patient's condition. A young person caring for an injured parent may experience disruption of education and developmental activities, whereas an employed adult may experience income loss and occupational conflict. A caregiver of a patient with an acute fracture may primarily experience short-term physical and practical pressure, while a caregiver managing a chronic orthopedic condition may face prolonged emotional strain, family conflict, and social isolation. The meaning and value of social support are therefore likely to differ according to context. Understanding these variations requires attention to the narratives through which caregivers explain what makes caregiving difficult, what forms of support are absent, and what kinds of assistance they perceive as most helpful.

Taken together, previous studies demonstrate that family caregiving in orthopedic and related mobility-limiting conditions can generate substantial physical, emotional, social, and economic burden, while social support may play a protective role in caregiver adaptation and well-being (Alemu et al., 2025; Darragh et al., 2015; Longo et al., 2020; Montero-Cuadrado et al., 2023; Rodakowski et al., 2012; Ryerson Espino et al., 2022; Siddiqui et al., 2010; Welsh et al., 2023). Nevertheless, there remains a need for context-sensitive qualitative evidence that explains how family caregivers of orthopedic patients themselves experience burden and how emotional, practical, informational, familial, financial, and professional forms of social support influence that burden within their everyday lives.

Accordingly, the aim of this study was to qualitatively explore the lived experiences of family caregivers of orthopedic patients and to clarify the role of social support in reducing their perceived caregiving burden.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a qualitative research design using a descriptive phenomenological approach to explore in depth the lived experiences of family caregivers of orthopedic patients and to understand the role of social support in reducing their caregiving burden. Descriptive phenomenology was selected because it provides an appropriate methodological framework for examining individuals' experiences as they are perceived and described by the participants themselves, while minimizing the imposition of predetermined theoretical assumptions or interpretations by the researchers. Through this approach, the study sought to identify the essential structure and meaning of family caregiving in the context of orthopedic illness and hospitalization, with particular attention to the physical, psychological, emotional, financial, and social dimensions of caregiver burden and the ways in which different forms of social support could alleviate or intensify these experiences. Throughout the research process, particular attention was paid to maintaining a phenomenological orientation by focusing on participants' direct accounts of their experiences and attempting to bracket the researchers' prior assumptions as far as possible.

The study population consisted of family caregivers of orthopedic patients hospitalized at the Bone and Joint Reconstruction Research Center, Shafa Yahyaian Hospital, affiliated with Iran University of Medical Sciences. Participants were selected using purposive sampling, with an emphasis on obtaining maximum variation in caregiving experiences. Accordingly, caregivers with different ages, occupational circumstances, family relationships to the patient, caregiving responsibilities, and experiences of caring for patients with acute or chronic orthopedic conditions were considered. The sampling strategy was intended to capture heterogeneous experiences of family caregiving and to provide a richer understanding of how social support operates under different personal, familial, and clinical circumstances. From the interviews conducted during the study, five information-rich interviews were selected for the final phenomenological analysis based on their relevance, depth, and ability to illuminate the phenomenon under investigation. The participants included a 41-year-old son-in-law who was a street vendor and had provided care for two nights to his father-in-law following hip replacement surgery; his account was characterized by considerable financial strain, including the additional stress

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associated with the theft of his vehicle, an initial underestimation of caregiving demands, and a pronounced need for financial support. Another participant was a 48-year-old employed sister caring for a sibling with congenital abnormalities affecting both legs, whose narrative reflected substantial anxiety regarding caregiving procedures, hygiene, and the patient's future living situation following recovery. A 17-year-old male student caring for his father after pelvic and wrist fractures caused by a fall from height described absence from school, physical strain manifested by back pain, feelings of vulnerability and unfairness, as well as relatively strong support from other family members. A 32-year-old homemaker daughter caring for her mother, who had experienced a longstanding chronic condition and had used psychiatric medication since 1988, described prolonged caregiver burden, conflict among siblings, fear of being left alone with caregiving responsibilities, and persistent feelings of insecurity and anxiety. The fifth participant was a 23-year-old male accountant caring for a parent with a fracture involving the pelvic region and a previous history of severe physical injury, including upper-limb amputation following electrical injury; his account emphasized loneliness, social withdrawal, feelings of guilt, and a need for recreation, emotional release, and interpersonal support. The diversity of these caregiving situations enabled the study to explore both common and distinct manifestations of caregiver burden and the perceived protective role of social support.

2.2. Data Collection Tools

Data were collected primarily through individual semi-structured, in-depth interviews. Semi-structured interviewing was considered appropriate because it provided sufficient consistency across interviews while simultaneously allowing participants to describe their experiences freely and to introduce issues that were personally meaningful but not necessarily anticipated by the researchers. Interviews began with broad, open-ended questions designed to encourage participants to narrate their caregiving experiences in their own words. Participants were invited to describe how caring for their family member had affected their daily lives, physical health, emotional well-being, financial circumstances, family relationships, occupational or educational responsibilities, and social interactions. Particular attention was also given to participants' experiences of receiving or not receiving support from family members, relatives, friends, healthcare professionals, institutions, and other potential sources of assistance. Depending on participants' responses, probing questions were used to clarify meanings, explore examples, and obtain deeper descriptions of important experiences. Questions such as how participants felt when caregiving responsibilities increased, who supported them during difficult periods, what type of support they considered most helpful, what happened when adequate support was unavailable, and how additional assistance might have changed their caregiving experience were used flexibly according to the course of each interview.

The interview process continued until sufficiently rich and detailed accounts of the phenomenon had been obtained and the researchers achieved an in-depth understanding of the participants' experiences. Rather than restricting the interviews to predetermined categories, the interviewer encouraged participants to elaborate on both positive and negative dimensions of caregiving and social support. This flexible process was particularly important because caregiver burden was experienced differently across participants, ranging from physical fatigue and interruption of education or employment to financial hardship, anxiety, social isolation, family conflict, guilt, and uncertainty about the future. Similarly, social support emerged through multiple forms, including emotional reassurance, practical assistance with caregiving activities, financial help, sharing of caregiving responsibilities, companionship, opportunities for recreation and emotional release, and informational guidance regarding patient care.

Before each interview, the purpose and procedures of the study were explained to the participants, and informed consent was obtained. Participants were informed that their participation was voluntary and that the information obtained from the interviews would be treated confidentially. With participants' consent, interviews were recorded to ensure accurate preservation of their narratives. The recorded interviews were subsequently transcribed verbatim so that participants' language, expressions, and descriptions could be retained as accurately as possible during analysis. The researchers repeatedly reviewed the transcripts alongside the recorded material when necessary to ensure transcription accuracy. The resulting interview transcripts constituted the primary qualitative dataset and were analyzed with attention to statements reflecting caregiver burden, perceived social support, unmet support needs, family relationships, emotional responses, and the ways in which the presence or absence of support influenced participants' caregiving experiences.

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The rigor and trustworthiness of the qualitative data were addressed using the criteria proposed by Lincoln and Guba, including credibility, transferability, dependability, and confirmability. Credibility was enhanced through sustained engagement with the research topic, close attention to participants' narratives, and member checking. Participants were given opportunities to review or comment on the researchers' interpretation of their experiences so that the findings would accurately represent their actual perceptions and lived experiences. Transferability was supported through the provision of sufficiently detailed descriptions of the research setting, participant characteristics, family caregiving roles, and relevant clinical circumstances, enabling readers to determine the potential applicability of the findings to comparable populations or contexts. Dependability was strengthened by systematically documenting the procedures used for data collection and analysis and maintaining a clear record of methodological and analytical decisions throughout the study. Confirmability was pursued by attempting to bracket the researchers' preconceptions, grounding interpretations in the participants' actual statements, and maintaining a transparent link between the original data, formulated meanings, thematic categories, and final interpretation. These procedures were intended to ensure that the findings reflected participants' experiences rather than the personal expectations or assumptions of the researchers.

2.3. Interventions

Compassion-Focused Therapy was implemented according to Gilbert's therapeutic framework and consisted of eight 90-minute group sessions conducted once per week. The first session focused on establishing a therapeutic relationship, introducing the nature and rationale of Compassion-Focused Therapy, explaining the concept of compassion, and clarifying the goals and expectations of treatment. The second session provided psychoeducation regarding the major emotion-regulation systems, including the threat and protection system, the drive and resource-seeking system, and the soothing and affiliative system, with particular emphasis on how imbalances among these systems may contribute to anxiety and psychological distress; participants were also introduced to the concept of the multiple-mind perspective. The third session addressed the meaning and functions of compassion and introduced the three flows of compassion, namely compassion toward oneself, compassion toward others, and openness to receiving compassion from others. Particular attention was given to self-criticism and the ways in which harsh self-evaluation may intensify death anxiety and interfere with adjustment to cancer. During the fourth session, participants were trained in mindfulness and compassion-focused breathing exercises designed to enhance awareness of thoughts and emotions, facilitate physiological soothing, and reduce automatic emotional reactivity. The fifth session focused on compassion-focused imagery and the development of a compassionate self, through which participants practiced responding to suffering, fear, and vulnerability from a position characterized by warmth, wisdom, strength, and nonjudgment. During the sixth session, strategies for identifying and managing self-critical thoughts were introduced, and patients practiced replacing punitive or threatening internal dialogue with compassionate self-talk when confronting concerns related to mortality, recurrence of cancer, and difficulties in accepting the illness. The seventh session involved writing a compassionate letter to oneself and reconsidering distressing or painful experiences through a compassionate perspective in order to reduce shame, fear, and self-criticism. The eighth session was devoted to reviewing and integrating the skills acquired throughout treatment, consolidating therapeutic gains, identifying strategies for maintaining compassionate practices in everyday life, and developing an individualized plan for continued practice after termination of the intervention. The posttest assessment was administered following completion of the intervention.

Existential Therapy was conducted based on Yalom's existential therapeutic framework and consisted of eight 90-minute sessions held once per week. The first session focused on developing the therapeutic relationship, familiarizing participants with the fundamental principles of the existential approach, and introducing the four major existential concerns of death, freedom, existential isolation, and meaninglessness. The second session concentrated on the existential reality of death and encouraged patients to confront mortality awareness rather than relying on avoidance or denial. Participants were helped to reconsider death as an unavoidable and natural dimension of human existence and to examine how awareness of mortality could influence the way they approached life after cancer. The third session addressed freedom, choice, and personal responsibility, with emphasis on helping patients distinguish uncontrollable aspects of their medical condition from areas in which they retained the capacity to choose their attitudes, behaviors, priorities, and responses. The fourth session

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explored existential isolation and its distinction from interpersonal loneliness and social withdrawal. Patients were encouraged to recognize the ultimately individual nature of certain aspects of suffering while simultaneously developing more authentic and meaningful connections with significant others. The fifth session focused on identifying and reconstructing meaning in life and helping participants assign personal significance to their experience of cancer, recovery, suffering, and survival within an existential framework. During the sixth session, hope and hopelessness were examined from an existential perspective, and participants were encouraged to develop active acceptance of unavoidable realities, including human vulnerability, illness, uncertainty, and mortality, without equating acceptance with resignation or passivity. The seventh session addressed personal values, reconsideration of life priorities, and the development of meaningful and realistic goals compatible with the patients' current circumstances. Particular attention was given to translating clarified values into purposeful everyday choices and activities. The eighth and final session involved reviewing the therapeutic process, consolidating changes achieved during the sessions, examining the participants' understanding of authentic living, and developing an individualized plan for continuing a meaningful and responsible approach to life after termination of therapy. The posttest assessment was administered at the end of the intervention.

2.4. Data Analysis

The interview data were analyzed using Colaizzi's seven-step phenomenological analysis method, originally proposed in 1978. Analysis began with repeated reading of the complete interview transcripts to develop an overall understanding of each participant's experience and to become deeply familiar with the data. The researchers approached each transcript as a complete narrative before fragmenting the data into smaller analytical units, thereby preserving the contextual meaning of participants' statements. During subsequent readings, statements directly or indirectly related to caregiver burden, social support, unmet needs, family relationships, psychological distress, physical demands, financial difficulties, social isolation, and coping with caregiving responsibilities were identified. Through this process, 23 significant statements were extracted from the interviews. These statements represented experiences that were considered particularly informative regarding the phenomenon under investigation.

In the next stage, formulated meanings were developed from the significant statements. Participants' everyday descriptions were carefully examined and translated into concise phenomenological meanings while preserving the essence of the original narratives. The researchers sought to move from the literal wording of each statement toward its underlying experiential meaning without introducing interpretations unsupported by the data. For example, accounts of missing school, experiencing back pain while assisting a patient, worrying about personal income, feeling abandoned by siblings, or withdrawing from social interactions were considered not merely isolated events but expressions of broader dimensions of caregiver burden. Likewise, reports of receiving help from relatives, sharing caregiving responsibilities, obtaining financial assistance, having someone available for emotional conversation, or receiving guidance regarding patient care were interpreted in relation to the protective and burden-reducing functions of social support.

The formulated meanings were subsequently compared for similarities and differences and organized into thematic clusters. This process resulted in six principal thematic clusters encompassing 23 subthemes. Throughout thematic clustering, the researchers repeatedly returned to the original interview transcripts to ensure that the emerging themes remained consistent with participants' actual accounts and that contradictory or distinctive experiences were not eliminated merely to achieve thematic uniformity. The thematic organization was therefore developed iteratively, with themes refined as relationships among different experiences became clearer. Particular attention was paid to the interaction between caregiver burden and social support because the same caregiving demand could be experienced differently depending on the availability of emotional, instrumental, informational, familial, or financial assistance.

Following thematic development, a comprehensive description of the phenomenon was constructed by integrating the significant statements, formulated meanings, themes, and subthemes into a coherent account. This description incorporated the major physical, emotional, psychological, financial, familial, and social dimensions of the caregiving experience. The analysis demonstrated that caregiver burden was not limited to direct physical caregiving activities but was embedded in caregivers' broader life circumstances, including economic insecurity, disruption of employment or education, fear concerning the patient's future, strained family relationships, social withdrawal, guilt, and insufficient opportunities for personal

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rest and recreation. At the same time, social support was examined as a multidimensional resource capable of modifying the meaning and intensity of these burdens by distributing caregiving responsibilities, reducing loneliness, increasing caregivers' sense of security, providing practical or financial assistance, and creating opportunities for emotional expression.

The comprehensive description was then condensed into a fundamental structure representing the essential meaning of the phenomenon. Through this reduction process, the researchers sought to identify the core experiential structure connecting the participants' otherwise diverse narratives. This essential structure centered on the experience of carrying substantial caregiving responsibilities while the needs of the caregiver remained insufficiently recognized, alongside the potential of appropriate social support to reduce the physical, emotional, financial, and relational consequences of caregiving. The phenomenon was therefore conceptualized not merely as the burden associated with caring for an orthopedic patient but also as an experience of the caregiver becoming relatively invisible within a healthcare and family system primarily focused on the patient.

In the final stage of Colaizzi's method, the synthesized findings were returned to the participants for validation. Participants were asked to consider whether the themes and descriptions derived from the analysis were consistent with their lived experiences and whether the researchers had accurately represented the meanings conveyed during the interviews. Feedback obtained during this member-checking process was considered in the final interpretation of the findings. This final validation strengthened the credibility of the analysis and helped ensure that the essential structure identified by the researchers remained grounded in participants' experiences. Through the systematic application of Colaizzi's analytical stages and the trustworthiness criteria of Lincoln and Guba, the study aimed to provide a rigorous and transparent phenomenological account of caregiver burden among family caregivers of orthopedic patients and to clarify the role of social support in mitigating that burden.

3. Findings and Results

Five family caregivers of patients with orthopedic conditions participated in the final phenomenological analysis. The participants ranged in age from 17 to 48 years, with a mean age of 32.20 years. Three participants were male and two were female. In terms of relationship to the patient, two participants were sons, one was a daughter, one was a sister, and one was a son-in-law. Their occupational and social circumstances were heterogeneous and included a street vendor, an employee, a secondary-school student, a homemaker, and an accountant. This diversity provided access to caregiving experiences across different developmental stages, employment situations, financial conditions, and family roles. The clinical circumstances of the patients were also diverse. These included hip replacement surgery, congenital bilateral lower-limb problems, pelvic and wrist fractures following a fall from height, a longstanding chronic condition accompanied by long-term psychiatric medication use, and a fracture involving the pelvic region in a patient with a history of severe previous physical injury. The duration and intensity of caregiving therefore differed considerably across participants, ranging from an acute period of intensive hospital-based caregiving to prolonged caregiving associated with chronic illness and recurrent health problems.

Despite these differences, the narratives revealed a common experiential pattern in which caregiving responsibilities extended far beyond the direct physical care of the patient. Participants described changes in their physical comfort, sleep and rest, emotional stability, occupational or educational functioning, family relationships, financial security, and social participation. Social support emerged throughout the interviews as an important factor influencing how these demands were perceived and managed. When responsibilities were shared, emotional reassurance was available, or caregivers had access to practical and informational assistance, caregiving demands were experienced as more manageable. Conversely, inadequate support, family conflict, financial pressure, lack of information, and social isolation intensified the perceived burden. Analysis using Colaizzi's phenomenological method resulted in 23 subthemes that were organized into six overarching themes: physical and functional burden of caregiving; emotional and psychological vulnerability; financial pressure and disruption of everyday roles; family support and the sharing of caregiving responsibility; informational, instrumental, and healthcare-related support; and social connectedness, caregiver recognition, and the need for restorative support.

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Table 1

Overall Thematic Structure of Family Caregiver Burden and the Role of Social Support

Main Theme	Subthemes	Central Experiential Meaning
Physical and functional burden of caregiving	Physical fatigue and musculoskeletal discomfort; disruption of sleep and rest; complexity of direct caregiving activities; disruption of personal routines and self-care	Orthopedic caregiving imposed direct bodily and functional demands on caregivers, particularly when mobility assistance and continuous presence were required.
Emotional and psychological vulnerability	Anxiety and uncertainty; loneliness and perceived isolation; guilt and self-blame; feelings of helplessness and unfairness; fear concerning the future and being left alone with caregiving responsibilities	Caregiving was accompanied by substantial emotional strain, especially when the caregiver felt uncertain, unsupported, or solely responsible for the patient's future.
Financial pressure and disruption of everyday roles	Direct financial pressure; disruption of employment and income generation; disruption of education; conflict between caregiving and household or family responsibilities	Caregiving competed with caregivers' economic, educational, domestic, and developmental responsibilities and could threaten their perceived stability.
Family support and sharing of caregiving responsibility	Sharing of caregiving tasks; emotional reassurance from family members; family conflict and unequal distribution of responsibility; presence and companionship	Family support reduced burden when caregiving was shared and emotional reassurance was available, whereas unequal responsibility and conflict intensified burden.
Informational, instrumental, and healthcare-related support	Need for caregiving information and education; practical and instrumental assistance; reassurance and guidance from healthcare professionals	Caregivers required not only emotional support but also clear knowledge, practical assistance, and professional guidance to feel competent and secure in caregiving.
Social connectedness, caregiver recognition, and restorative support	Social withdrawal and narrowing of social life; need for recreation and emotional release; need for recognition and financial or institutional support	Caregiving could make caregivers socially invisible and disconnected, while recognition, opportunities for respite, emotional release, and institutional assistance could restore coping capacity.

As shown in Table 1, caregiver burden was a multidimensional phenomenon rather than a single experience of fatigue or distress. The six themes demonstrated that the burden of caring for an orthopedic patient was constructed through the interaction of physical demands, emotional reactions, economic circumstances, family relationships, access to information, and the caregiver's broader social environment. The findings also indicated that social support did not operate as an isolated variable. Instead, it functioned across several domains of the caregiving experience. Practical support could reduce the amount of physical work performed by one caregiver, family support could distribute responsibility, emotional support could diminish loneliness and anxiety, informational support could reduce uncertainty, and financial or institutional support could relieve concerns related to loss of income and the costs of care. Accordingly, the narratives suggested that the effect of social support on caregiver burden depended not merely on whether support was present, but on whether the type of support corresponded to the caregiver's actual and immediate needs.

Physical demands were among the most immediate aspects of caregiving described by the participants. Orthopedic conditions frequently restrict movement and increase dependence on others for transfers, positioning, mobility, hygiene, and other activities of daily living. These demands were particularly difficult for caregivers who lacked physical assistance from others or did not have adequate knowledge of safe caregiving techniques. The 17-year-old son, for example, experienced back pain in the context of caring for his father following pelvic and wrist fractures. His experience demonstrated that the physical burden of caregiving could itself become a source of health difficulty for the caregiver. Participants also described interruption of rest and normal routines, suggesting that physical burden was not limited to lifting or assisting the patient but included the cumulative effects of vigilance, remaining in the hospital, irregular sleep, and postponement of personal needs.

The physical burden was closely connected to emotional and psychological vulnerability. Participants expressed various combinations of anxiety, uncertainty, loneliness, guilt, fear, helplessness, and concern about the future. The 48-year-old sister's account was strongly characterized by anxiety concerning how care should be provided, how hygiene needs should be managed, and what would happen to her sister's living circumstances after improvement. The 32-year-old daughter caring for her chronically ill mother expressed fear of being left alone with long-term responsibility and insecurity associated with conflict among siblings. The 23-year-old son described loneliness, social distancing, and guilt, demonstrating how caregiving could alter the caregiver's relationship not only with the patient but also with the self and the surrounding social world. These accounts showed that emotional burden arose both from the illness itself and from uncertainty about whether the

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caregiver would have sufficient resources, assistance, and companionship to continue in the caregiving role.

Table 2

Physical and Functional Burden and Emotional and Psychological Vulnerability

Main Theme	Subtheme	Examples of Meaning Units Identified in the Narratives	Participants Most Clearly Reflecting the Subtheme	Interpretive Meaning
Physical and functional burden of caregiving	Physical fatigue and musculoskeletal discomfort	Back pain after assisting the patient; bodily exhaustion associated with continuous presence and direct care; physical strain caused by mobility-related needs	P3 and other caregivers involved in direct physical assistance	The patient's physical dependence may transfer part of the bodily burden of illness to the family caregiver.
Physical and functional burden of caregiving	Disruption of sleep and rest	Remaining with the patient for extended periods; spending nights in caregiving; inability to obtain sufficient uninterrupted rest	Particularly P1, with relevance across acute hospital caregiving experiences	Continuous availability reduced opportunities for physical recovery and increased cumulative fatigue.
Physical and functional burden of caregiving	Complexity of direct caregiving activities	Concern about hygiene, positioning, mobility, and how to provide care correctly following orthopedic treatment	Particularly P2, with relevance to participants facing mobility limitations	Lack of confidence in performing caregiving tasks increased both practical burden and psychological stress.
Physical and functional burden of caregiving	Disruption of personal routines and self-care	Personal needs being postponed; normal daily routines reorganized around the patient; reduced time for the caregiver's own physical and personal needs	P1, P3, P4, and P5	The caregiving role gradually displaced ordinary self-care and personal routines.
Emotional and psychological vulnerability	Anxiety and uncertainty	Worry about how care should be provided; uncertainty regarding recovery; concern about hygiene and future living circumstances	Particularly P2 and P4	Uncertainty regarding the patient's needs and future increased anticipatory anxiety.
Emotional and psychological vulnerability	Loneliness and perceived isolation	Feeling alone in the caregiving experience; distancing from other people; perceiving insufficient companionship	Particularly P5 and P4	Absence of supportive social interaction intensified the subjective weight of caregiving.
Emotional and psychological vulnerability	Guilt and self-blame	Feeling guilty in relation to the patient or one's own need for distance, rest, or personal life	Particularly P5	Caregivers could interpret attention to their own needs as incompatible with their caregiving responsibilities.
Emotional and psychological vulnerability	Feelings of helplessness and unfairness	Feeling vulnerable, wronged, or burdened by circumstances beyond personal control	Particularly P3, with related experiences in P4	The inability to change the patient's condition or one's caregiving obligations generated feelings of powerlessness.
Emotional and psychological vulnerability	Fear concerning the future and being left alone with caregiving responsibilities	Fear that other relatives would withdraw; uncertainty about long-term care; concern about future responsibility	Particularly P4 and P2	The anticipated continuation of caregiving without reliable support could be as distressing as current caregiving demands.

Table 2 demonstrates the close interrelationship between physical burden and emotional distress. Physical strain was not experienced independently of psychological processes. For example, concern about how to move, clean, or care for a patient was simultaneously a practical challenge and a source of anxiety. Similarly, lack of rest did not merely produce tiredness; it reduced caregivers' emotional resources and their capacity to tolerate uncertainty and interpersonal tension. The adolescent caregiver's back pain was especially important because it illustrated how a caregiver could become physically vulnerable while attempting to compensate for the patient's impaired mobility. In this context, practical assistance from another family member or instruction from healthcare staff could potentially reduce both physical and emotional burden at the same time.

The emotional findings also suggested that lack of support influenced caregivers through anticipation as well as through current experience. Participants did not only worry about what they were presently doing; they worried about what would happen if the patient remained dependent, if other family members did not participate, or if they themselves became unable to continue. Fear of future responsibility was particularly visible in the narrative of the daughter caring for her chronically ill mother. Long-term caregiving had become intertwined with family conflict and fear of being left alone with responsibility. In contrast, the

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17-year-old participant reported relatively good family support despite substantial physical and educational pressures. His experience suggested that the presence of supportive family members did not completely eliminate burden, but could change its meaning by reducing the sense of isolation and sole responsibility. Thus, emotional support appeared to serve as a psychological buffer, whereas its absence intensified uncertainty, loneliness, guilt, and helplessness.

A second major dimension of the experience concerned the disruption of caregivers' ordinary social and economic roles. Participants were not solely caregivers; they were also employees, students, homemakers, income earners, siblings, children, and spouses. The caregiving role frequently competed with these existing responsibilities. The most explicit financial pressure was reported by the 41-year-old street vendor caring for his father-in-law following hip replacement surgery. His caregiving experience occurred while he was already experiencing serious financial strain related to the theft of his vehicle. In this context, caregiving could not be separated from the caregiver's broader economic vulnerability. Although he initially appeared to perceive short-term caregiving as relatively manageable, the combination of lost earning capacity, external financial hardship, and responsibility for the patient highlighted the importance of financial assistance as a form of social support.

The 17-year-old participant demonstrated a different form of role disruption. His caregiving responsibilities contributed to absence from school, showing that caregiving burden can interfere with developmental and educational responsibilities even when direct financial loss is not the primary concern. For adult caregivers, the same conflict emerged in relation to employment and household obligations. Caregiving required time and physical presence, and these demands inevitably reduced time available for paid work, domestic responsibilities, social relationships, and personal recovery. Consequently, the burden of caregiving was experienced partly as a conflict between multiple roles that could not always be performed simultaneously.

Family structure strongly influenced how these competing demands were managed. When family members shared responsibility, provided companionship, or reassured the primary caregiver, the perceived burden was reduced. In contrast, when responsibility was distributed unequally or conflict existed among siblings, caregiving became a source of relational tension. Family support therefore had a dual character in participants' experiences. The family could be the most immediate and effective source of help, but it could also become a source of distress when expectations regarding responsibility were unclear or perceived as unfair.

Table 3

Financial and Role-Related Burden and Family Support in the Distribution of Caregiving Responsibility

Main Theme	Subtheme	Examples of Meaning Units Identified in the Narratives	Participants Most Clearly Reflecting the Subtheme	Interpretive Meaning
Financial pressure and disruption of everyday roles	Direct financial pressure	Existing economic hardship; need for financial assistance; caregiving occurring alongside serious personal financial problems	Particularly P1	Caregiving burden was intensified when families had limited economic reserves or were simultaneously facing other financial crises.
Financial pressure and disruption of everyday roles	Disruption of employment and income generation	Time spent providing care reducing availability for work; concern about income while remaining with the patient	Particularly P1 and employed participants	Caregiving created an opportunity cost in which time devoted to the patient could reduce earning capacity.
Financial pressure and disruption of everyday roles	Disruption of education	Absence from school because of the father's hospitalization and caregiving needs	Particularly P3	Caregiving could interfere with age-appropriate educational responsibilities and future-oriented activities.
Financial pressure and disruption of everyday roles	Conflict between caregiving and household or family responsibilities	Caregiving competing with household tasks, employment, personal life, and other family obligations	Particularly P4, with relevance to P1, P2, and P5	Caregivers experienced burden partly because they had to manage several roles simultaneously without relinquishing pre-existing responsibilities.
Family support and sharing of caregiving responsibility	Sharing of caregiving tasks	Assistance from other relatives; not having to perform all caregiving activities alone; distribution of responsibility	Particularly visible in P3's account of good family support	Shared responsibility reduced both practical workload and the perception of being solely accountable for the patient.

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Family support and sharing of caregiving responsibility	Emotional reassurance from family members	Feeling supported by close relatives; having others who acknowledged the difficulty of caregiving; receiving encouragement	Particularly P3, with varying relevance across participants	Emotional reassurance strengthened caregivers' ability to tolerate difficult caregiving conditions.
Family support and sharing of caregiving responsibility	Family conflict and unequal distribution of responsibility	Conflict among siblings; concern that responsibility would remain with one person; perceived imbalance in family involvement	Particularly P4	Family relationships could themselves become a source of caregiver burden when support was perceived as unequal or unreliable.
Family support and sharing of caregiving responsibility	Presence and companionship	Having another person available during caregiving; not feeling alone during stressful periods; value of simple interpersonal presence	P3, P4, and P5	Companionship functioned as a form of support even when it did not directly reduce the technical tasks of caregiving.

The findings presented in Table 3 indicate that caregiver burden was strongly affected by the relationship between caregiving demands and the caregiver's existing responsibilities. Financial stress was particularly pronounced when caregiving occurred in the context of unstable income or unrelated economic crises. For the participant working as a street vendor, the loss of his vehicle had already weakened his economic security, and the need to remain involved in hospital caregiving added another layer of strain. His narrative demonstrated that requests for support from caregivers cannot be understood exclusively in psychological terms. Financial support may be a fundamental component of caregiver support, particularly for individuals whose income depends on daily work or whose employment offers little flexibility.

Role disruption was also evident in the adolescent participant's absence from school. This finding expands the concept of caregiver burden beyond middle-aged or older adult caregivers and illustrates that family illness may redistribute responsibilities to younger family members. Although this participant reported good family support, his caregiving involvement still affected his education and physical health. This suggests that family support may attenuate rather than completely remove caregiver burden. Even in supportive families, caregiving can create unavoidable interruptions in ordinary life.

The family emerged as the central social system within which caregiving responsibilities were either moderated or intensified. Sharing care reduced the amount of practical responsibility concentrated on one individual, but it also conveyed an important symbolic message: the caregiver was not alone and the patient's needs were a collective family concern. By contrast, conflict among siblings and uncertainty about who would assume responsibility contributed to anxiety and resentment. The experience of the 32-year-old daughter was especially illustrative. Her burden was shaped not only by her mother's chronic condition but also by tensions among family members and fear that long-term responsibility might remain primarily with her. Therefore, the protective function of family support depended on consistency, fairness, and actual participation rather than the mere existence of family members.

The participants' accounts indicated that effective support needed to extend beyond emotional encouragement. Orthopedic caregiving often requires specific practical knowledge, particularly in relation to movement restrictions, hygiene, transfers, positioning, and postoperative or rehabilitative care. Uncertainty regarding how to perform these activities could amplify anxiety and create a sense of incompetence. The 48-year-old sister's concern about hygiene and future care was particularly indicative of the need for clear information. Her narrative suggested that caregivers may experience substantial stress when they are expected to perform or coordinate care without sufficient understanding of how the patient's needs will change over time.

Instrumental assistance also emerged as an important component of support. Caregivers could benefit from another person's direct participation in physical caregiving, transportation, household responsibilities, or other tasks that become difficult when substantial time must be devoted to the patient. Professional support from healthcare personnel was similarly important. Clear explanations, anticipatory guidance, reassurance, and practical instructions could potentially reduce uncertainty and improve the caregiver's sense of preparedness. In this regard, informational and professional support operated not simply as the transmission of medical facts but as mechanisms through which caregivers could gain a greater sense of control.

The final theme extended beyond the immediate family and healthcare environment to caregivers' social lives and sense of personal recognition. The experience of the 23-year-old son was particularly important in this respect. His narrative included feelings of loneliness, withdrawal from other people, guilt, and a need for recreation and emotional release. These experiences revealed that prolonged or

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demanding caregiving may progressively narrow the caregiver's social world. Social withdrawal could occur because of lack of time, emotional exhaustion, perceived inability to discuss the experience with others, or guilt about engaging in enjoyable activities while the patient remained unwell. Opportunities for respite, recreation, and emotional expression therefore represented meaningful forms of support rather than optional luxuries.

Another recurrent implication of the narratives was that caregivers themselves could become overlooked. The healthcare environment was necessarily focused on the patient, yet caregivers were simultaneously absorbing many of the practical and emotional consequences of illness. The essential structure identified through phenomenological analysis was therefore characterized partly by the experience of the "unseen caregiver": an individual who was indispensable to the patient's care but whose own physical, psychological, informational, and financial needs could remain insufficiently recognized.

Table 4

Informational, Instrumental, Professional, and Broader Social Support Needs

Main Theme	Subtheme	Examples of Meaning Units Identified in the Narratives	Participants Most Clearly Reflecting the Subtheme	Interpretive Meaning
Informational, instrumental, and healthcare-related support	Need for caregiving information and education	Uncertainty about how to provide hygiene care; questions about future care; concern about performing caregiving correctly	Particularly P2, with relevance to caregivers of patients with mobility limitations	Information reduced ambiguity and could increase perceived competence in the caregiving role.
Informational, instrumental, and healthcare-related support	Practical and instrumental assistance	Need for help with physical care, mobility, daily tasks, transportation, or other responsibilities displaced by caregiving	P1, P2, P3, and P4	Direct assistance reduced the objective amount of work that had to be performed by a single caregiver.
Informational, instrumental, and healthcare-related support	Reassurance and guidance from healthcare professionals	Need for explanations, practical instruction, reassurance regarding care procedures, and guidance concerning recovery	Particularly P2 and caregivers facing unfamiliar orthopedic care requirements	Professional communication could transform uncertainty into preparedness and reduce anxiety associated with care.
Social connectedness, caregiver recognition, and restorative support	Social withdrawal and narrowing of social life	Distancing from other people; reduced social participation; feeling increasingly alone in the caregiving experience	Particularly P5, with relevance to prolonged caregiving situations	Caregiving could progressively separate individuals from sources of ordinary social reinforcement and belonging.
Social connectedness, caregiver recognition, and restorative support	Need for recreation and emotional release	Desire for opportunities to leave the caregiving environment temporarily; need to talk, relax, recreate, or release emotional tension	Particularly P5	Rest and recreation functioned as restorative resources necessary for maintaining caregiving capacity rather than as avoidance of responsibility.
Social connectedness, caregiver recognition, and restorative support	Need for recognition and financial or institutional support	Need for caregivers' own difficulties to be acknowledged; desire for financial help; need for formal systems to consider caregivers as recipients of support	Particularly P1, P4, and P5	Sustainable caregiving required recognition of the caregiver as an individual with legitimate needs, not merely as an informal extension of patient care.

As presented in Table 4, support was experienced as most useful when it addressed the concrete source of burden. Emotional reassurance alone could not fully resolve uncertainty about how to perform care, just as informational guidance could not compensate for severe financial hardship or social isolation. The results therefore support a multidimensional understanding of social support. Informational support was particularly relevant when caregivers lacked confidence about caregiving procedures or the patient's future needs. Instrumental support was important when the physical and practical demands of care exceeded what one person could reasonably manage. Professional support contributed to a sense of competence and safety by providing clear guidance and reducing ambiguity. Broader social support helped preserve the caregiver's connection to life outside the caregiving role.

The need for recreation and emotional release was a particularly significant finding because it highlighted a frequently neglected dimension of family caregiving. The 23-year-old caregiver's experience showed that loneliness and social withdrawal could coexist with a strong sense of responsibility toward the patient. His need for recreation did not represent indifference to caregiving; rather, it reflected depletion of emotional resources. Temporary respite, supportive conversation, social contact, and opportunities to engage in personally meaningful activities could therefore

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be understood as mechanisms for restoring psychological capacity. Without such restorative opportunities, the caregiver risked becoming increasingly isolated and emotionally exhausted.

The findings further demonstrated that recognition itself constituted a form of support. Participants' experiences suggested that caregivers often occupied an ambiguous position: they were essential to the continuity of care but were not necessarily treated as individuals whose own needs required assessment. Financial difficulties, pain, anxiety, interruption of work or education, and social withdrawal could remain secondary to the patient's clinical needs. The concept of caregiver recognition therefore emerged as an important interpretive dimension of the analysis. Recognition involved acknowledging the caregiver's workload, asking about the caregiver's difficulties, providing appropriate information, facilitating shared caregiving, and connecting families with available practical or financial resources.

When the six themes were considered together, the lived experience of family caregiving for orthopedic patients could be understood as a dynamic balance between accumulating demands and available supportive resources. Burden increased when several pressures occurred simultaneously. For example, physical caregiving was more difficult when the caregiver was tired, uninformed, financially vulnerable, and unsupported by other relatives. Emotional distress intensified when uncertainty about the patient's recovery was accompanied by fear of being left alone with responsibility. Financial hardship became more threatening when caregiving interfered with work, and family conflict became more distressing when there was no alternative source of assistance. Thus, the burden described by participants was cumulative and interactive rather than additive in a simple sense.

Social support reduced burden through several interconnected mechanisms. First, sharing caregiving activities reduced the objective workload placed on a single individual. Second, emotional reassurance diminished the subjective sense of facing the situation alone. Third, informational support reduced uncertainty and strengthened caregivers' perceived competence. Fourth, financial and instrumental assistance addressed practical pressures that could not be solved through emotional encouragement. Fifth, companionship and opportunities for recreation protected caregivers from complete social withdrawal. Finally, recognition by relatives and healthcare professionals validated the caregiver's needs and helped counteract the experience of becoming invisible within the caregiving process.

The narratives also showed that the same clinical condition could generate different levels and forms of caregiver burden depending on the social context surrounding the caregiver. A severe orthopedic injury did not automatically produce the greatest perceived burden when responsibilities were shared and support was available. Conversely, even a relatively limited period of caregiving could become highly stressful when it occurred alongside economic hardship, unfamiliar caregiving tasks, or inadequate assistance. This finding underscores that caregiver burden cannot be inferred solely from the severity of the patient's diagnosis or physical impairment. The caregiver's age, economic resources, competing roles, family relationships, access to information, social connectedness, and availability of practical support all shaped the experience.

Another important finding was the temporal dimension of burden. Acute hospital caregiving produced intensive short-term demands involving sleep disruption, physical presence, uncertainty, and immediate practical pressures. Chronic caregiving, by contrast, was associated with concerns about the indefinite continuation of responsibility, recurrent family conflict, fear of future isolation, and gradual erosion of personal and social resources. The narratives therefore suggested that support needs may change over time. During hospitalization, caregivers may primarily need practical guidance, rest, task sharing, and information about immediate care. During prolonged caregiving, sustained family participation, respite, emotional support, social connection, and institutional assistance may become increasingly important.

The phenomenological structure emerging from the participants' accounts can ultimately be summarized as the experience of assuming responsibility for a physically dependent family member while simultaneously attempting to preserve one's own physical, emotional, economic, familial, educational, and social functioning. Caregivers were continually negotiating between the patient's needs and their own resources. When support was sufficient, this negotiation remained difficult but comparatively manageable. When support was absent, inconsistent, or mismatched with actual needs, caregiving expanded into multiple areas of the caregiver's life and produced a stronger experience of burden.

The central meaning underlying the findings was therefore not merely “having too much care work.” Rather,

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caregiver burden was experienced as a condition in which responsibility became concentrated while the caregiver's own needs became progressively less visible. Social support reduced this burden by redistributing responsibility, restoring connection, increasing competence, reducing uncertainty, and affirming that the caregiver was also a person in need of care. From this perspective, supporting the family caregiver represents an integral component of orthopedic patient care rather than an intervention separate from the patient's treatment.

4. Discussion and Conclusion

The present qualitative study explored the lived experiences of family caregivers of orthopedic patients, with particular emphasis on the role of social support in reducing caregiver burden. The findings showed that caregiver burden was a multidimensional experience involving physical and functional strain, emotional and psychological vulnerability, financial pressure, disruption of occupational and educational roles, family conflict, uncertainty regarding caregiving tasks, social withdrawal, and a need for recognition and restorative support. Six main themes were identified: physical and functional burden of caregiving; emotional and psychological vulnerability; financial pressure and disruption of everyday roles; family support and sharing of caregiving responsibility; informational, instrumental, and healthcare-related support; and social connectedness, caregiver recognition, and restorative support. Taken together, the findings suggest that caregiver burden in orthopedic contexts is not merely a consequence of the patient's physical dependence, but rather emerges from the interaction between caregiving demands and the availability, quality, and suitability of supportive resources.

One of the most prominent findings was the physical burden experienced by caregivers. Participants described fatigue, musculoskeletal discomfort, disruption of rest, and difficulties associated with direct caregiving activities such as mobility assistance and hygiene-related care. This finding is consistent with previous research indicating that informal caregiving for individuals with musculoskeletal and mobility-related conditions can expose caregivers to considerable physical strain. Darragh and colleagues showed that caregiving activities often involve awkward postures, lifting, bending, and repetitive physical tasks that may contribute to musculoskeletal discomfort among informal caregivers (Darragh et al., 2015). Similarly, the systematic review conducted by Alemu and colleagues demonstrated that informal caregiving for adults with musculoskeletal conditions can produce substantial physical burden and affect caregivers' own health and functioning (Alemu et al., 2025). The current findings extend this evidence by illustrating how these physical demands are experienced subjectively in everyday caregiving situations, particularly when the caregiver is young, untrained, or lacks practical assistance from others.

The physical findings also align with evidence showing that caregivers themselves may require preventive and therapeutic interventions. Montero-Cuadrado and colleagues examined musculoskeletal pain among family caregivers and demonstrated the relevance of targeted physical programs for reducing caregiver-related physical problems (Montero-Cuadrado et al., 2023). This is important in the present study because physical burden was not simply reported as tiredness; it was linked to pain, reduced rest, disruption of routines, and increasing vulnerability of the caregiver. The findings therefore suggest that the physical health of caregivers should be viewed as an integral part of orthopedic care. When a caregiver becomes physically exhausted or develops pain, the sustainability and quality of caregiving may also be compromised. Practical assistance, instruction in safe movement and transfer techniques, and opportunities for rest may therefore have both caregiver-centered and patient-centered benefits.

A second major finding concerned emotional and psychological vulnerability. Participants described anxiety, uncertainty, loneliness, guilt, helplessness, fear of the future, and concern about being left alone with caregiving responsibilities. These experiences are consistent with previous studies showing that caring for patients with orthopedic or mobility-limiting conditions can produce considerable psychological distress. Siddiqui and colleagues reported substantial stress among caregivers of patients with osteoporotic hip fractures, particularly in relation to the sudden onset of dependency and the demands associated with post-fracture care (Siddiqui et al., 2010). Likewise, Longo and colleagues identified emotional strain, uncertainty, changes in family roles, and concern regarding care responsibilities as recurring challenges among family caregivers of orthopedic patients (Longo et al., 2020). The present findings support these observations and indicate that psychological burden is intensified when caregivers perceive the future as uncertain or believe that continued responsibility may fall primarily on them.

The emotional experiences identified in this study also highlight the importance of social support as a psychological

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buffer. Participants who perceived stronger family involvement described caregiving as more manageable, even when they continued to experience physical strain or disruption of daily life. This finding is consistent with the work of Rodakowski and colleagues, who found that social support plays an important role in predicting caregiver burden and can reduce the subjective impact of caregiving demands (Rodakowski et al., 2012). The current study suggests that this effect may operate through several mechanisms. Emotional reassurance can reduce loneliness, shared responsibility can decrease the sense of being trapped in the caregiving role, and simple companionship can make difficult circumstances feel less isolating. Social support therefore appears to influence not only the amount of care work required but also the caregiver's interpretation of that work.

This interpretation is further supported by research on families living with spinal cord injury. Ryerson Espino and colleagues demonstrated that coping and social support are closely related to caregiver well-being and adjustment in families dealing with long-term functional limitations (Ryerson Espino et al., 2022). Although the present study focused on orthopedic patients more broadly, the similarities are notable because both contexts may involve reduced mobility, dependency, prolonged recovery, and the need for substantial family involvement. The current findings indicate that emotional and relational support can help caregivers preserve psychological resilience, whereas insufficient support may contribute to loneliness, guilt, and social withdrawal. These findings reinforce the idea that caregiver burden is relationally constructed and cannot be fully understood without considering the caregiver's social environment.

Financial pressure and disruption of everyday roles formed another important aspect of the findings. Caregiving interfered with employment, income generation, education, household responsibilities, and personal routines. The experience of the street-vendor caregiver was particularly illustrative because caregiving occurred alongside severe financial strain, while the adolescent caregiver experienced absence from school. These findings are in line with the broader evidence synthesized by Alemu and colleagues, who reported that informal caregiving for adults with musculoskeletal conditions can have consequences for employment, productivity, personal finances, and broader economic functioning (Alemu et al., 2025). The present study demonstrates that these economic consequences are not peripheral to caregiver burden but are often central to how caregiving is experienced. Time devoted to caregiving may reduce the ability to work, study, or fulfill other responsibilities, and this can create a secondary burden that extends beyond the patient's clinical condition.

The findings also correspond with studies examining quality of life among family caregivers of individuals with chronic disabling conditions. Ebrahimzadeh and colleagues showed that spouses of veterans with chronic spinal cord injury experienced compromised quality of life and that multiple contextual and personal factors influenced their well-being (Ebrahimzadeh et al., 2013). Although the caregiver population in the current study was more heterogeneous, a similar pattern emerged. Burden was greater when caregiving competed with other important life roles and when caregivers lacked sufficient resources to maintain balance between the patient's needs and their own responsibilities. This suggests that caregiver support programs should not be limited to emotional counseling but should also consider occupational flexibility, financial vulnerability, respite, and practical assistance.

Family support emerged as one of the most influential dimensions of the caregiving experience. Participants described both the protective effects of shared responsibility and the harmful effects of conflict or unequal distribution of care. When family members participated in caregiving, the primary caregiver experienced less isolation and greater emotional security. In contrast, when siblings disagreed or caregiving responsibilities were perceived as unfairly distributed, burden increased. This finding is consistent with qualitative evidence from Iranian family caregivers of older adults with multiple chronic conditions, in which insufficient support, family-related challenges, and the cumulative demands of care were identified as important sources of strain (Malmir et al., 2022). The current study adds that the family can function simultaneously as a source of protection and as a source of burden depending on the quality, consistency, and fairness of participation.

The dual role of family support is especially important in contexts where caregiving is primarily understood as a family responsibility. The mere presence of relatives does not necessarily reduce burden if practical responsibilities remain concentrated on one individual. Effective support requires active participation rather than symbolic availability. The experiences in this study showed that emotional reassurance was valuable, but task sharing and dependable involvement were equally important. This is consistent with the concept of social support as a multidimensional resource, as demonstrated by Rodakowski

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and colleagues, where different forms of support were associated with caregiver burden in distinct ways (Rodakowski et al., 2012). The present findings therefore suggest that family-based interventions should focus not only on encouraging emotional support but also on clarifying responsibilities and promoting more equitable distribution of caregiving tasks.

Another important theme concerned informational and professional support. Participants expressed uncertainty about hygiene, mobility, future care, and how to perform caregiving activities correctly. These concerns closely correspond with the findings of Welsh and colleagues, whose qualitative study of informal caregivers supporting people after hip fracture surgery emphasized the need for better preparation, communication, and support during recovery (Welsh et al., 2023). Orthopedic caregiving often requires practical knowledge that family members may not possess before hospitalization. When discharge occurs without sufficient education, caregivers may feel unprepared and anxious, even when they are willing to help. The present findings suggest that uncertainty itself can become a source of burden and that clear, individualized guidance may reduce both practical difficulty and psychological distress.

The systematic review by Longo and colleagues similarly highlighted the importance of information, education, and healthcare support in the experiences of family caregivers of orthopedic patients (Longo et al., 2020). The present study reinforces this conclusion by showing that caregivers interpret professional guidance as more than technical instruction. Information can increase confidence, reduce fear of making mistakes, and create a sense of control in an otherwise uncertain situation. Therefore, healthcare professionals can directly influence caregiver burden through the quality of communication and the extent to which caregivers are prepared for post-hospital responsibilities.

Social withdrawal and the need for restorative support constituted another central finding. One participant particularly emphasized loneliness, distancing from others, guilt, and a need for recreation and emotional release. This finding is compatible with studies showing that caregiving can restrict social participation and compromise caregiver well-being. Ryerson Espino and colleagues demonstrated that social connection and coping resources were important for caregivers living with the consequences of spinal cord injury (Ryerson Espino et al., 2022). Similarly, Ebrahimzadeh and colleagues reported quality-of-life challenges among spouses of individuals with chronic spinal cord injury, suggesting that long-term caregiving can affect social and emotional functioning beyond the immediate caregiving context (Ebrahimzadeh et al., 2013). The present findings indicate that opportunities for rest, recreation, and emotional expression should not be considered optional or secondary. They may be essential for maintaining the caregiver's psychological resources.

The concept of the “unseen caregiver” also emerged as an important interpretive finding. Participants' narratives suggested that healthcare attention was primarily directed toward the patient while the caregiver's physical, emotional, financial, and social needs could remain insufficiently recognized. This is consistent with the broader literature emphasizing that informal caregivers contribute substantially to patient recovery while often receiving limited formal support (Alemu et al., 2025; Longo et al., 2020). The caregiver may become indispensable to the care process without being explicitly assessed as a person at risk of burden. Recognizing the caregiver as a secondary recipient of care may therefore represent an important conceptual shift in orthopedic services.

Overall, the findings indicate that social support reduces caregiver burden through multiple pathways rather than through a single generalized mechanism. Emotional support reduces loneliness and distress; family participation distributes responsibility; informational support reduces uncertainty; practical assistance decreases physical workload; financial support mitigates economic strain; professional guidance increases confidence; and restorative social contact protects against withdrawal and exhaustion. These findings are strongly consistent with previous evidence demonstrating associations between social support, coping, caregiver burden, physical health, and well-being across orthopedic, musculoskeletal, spinal cord injury, and chronic care contexts (Darragh et al., 2015; Montero-Cuadrado et al., 2023; Rodakowski et al., 2012; Ryerson Espino et al., 2022; Welsh et al., 2023). At the same time, the current phenomenological analysis provides a more integrated account of how these dimensions intersect within the lived experience of family caregivers.

The findings should be interpreted in light of several limitations. First, the study was based on a small purposively selected sample of five family caregivers, which is appropriate for phenomenological depth but limits the breadth of experiences represented. Second, participants were recruited from a single orthopedic center, and caregiving experiences in other hospitals, geographic regions, or healthcare systems may differ. Third, the

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participants varied considerably in age, relationship to the patient, duration of caregiving, and type of orthopedic condition, which enriched the data but also introduced heterogeneity that may have influenced the prominence of particular themes. Fourth, the findings were based on self-reported narratives and may have been affected by recall, emotional state at the time of interview, or reluctance to discuss family conflict and personal distress. Finally, although member checking and other trustworthiness strategies were used, qualitative interpretation inevitably involves researcher judgment, and complete elimination of interpretive influence is not possible.

Future research should examine these findings in larger and more diverse groups of family caregivers and should compare caregiving experiences across different orthopedic conditions, levels of patient dependency, stages of recovery, and family structures. Longitudinal qualitative studies would be particularly valuable for examining how caregiver burden and support needs change from hospitalization through rehabilitation and return home. Mixed-methods studies could combine phenomenological findings with validated measures of caregiver burden, social support, psychological distress, quality of life, and physical symptoms. Future studies should also investigate the experiences of adolescent caregivers, economically vulnerable caregivers, and individuals providing long-term care for patients with recurrent or chronic orthopedic problems. Intervention research could further evaluate whether structured caregiver education, respite services, family task-sharing programs, peer support, financial counseling, or physical training programs reduce burden and improve caregiver well-being.

In practice, orthopedic care teams should routinely assess the needs of family caregivers rather than focusing exclusively on the patient. Caregiver assessment should include physical strain, emotional distress, financial pressure, understanding of care procedures, family support, competing occupational or educational responsibilities, and access to respite. Before discharge, caregivers should receive individualized and practical education regarding mobility assistance, hygiene, positioning, safety, and warning signs requiring professional attention. Healthcare professionals should encourage the sharing of caregiving responsibilities among family members whenever possible and identify caregivers who appear isolated or overwhelmed. Referral pathways for psychological support, social work services, financial assistance, rehabilitation guidance, and community resources should be incorporated into care planning. Providing caregivers with opportunities for rest, emotional expression, and recognition of their own needs may improve both caregiver well-being and the sustainability of family-based care.

Authors' Contributions

All authors significantly contributed to this study.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent.

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