Beyond the Patient: Family-Level Consequences of Cancer on Quality of Life, Productivity, and Economic Stability

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ABSTRACT

Background: Cancer imposes a substantial global health burden, with consequences extending beyond the individual patient to affect family members who serve as primary caregivers throughout the disease trajectory. Despite growing recognition of caregiver burden, the multidimensional impacts on family quality of life, productivity, and economic stability remain insufficiently addressed in clinical practice and health policy. **Objective:** This narrative review aims to synthesize current evidence on the impact of cancer on family caregivers, particularly regarding quality of life, psychological well-being, work productivity, and financial stability. **Methods:** A literature search was conducted using PubMed, ScienceDirect, Springer Nature, Oxford Academic, and Google Scholar for articles published between 2020 and 2026 in English or Indonesian. A combination of Boolean operators (AND, OR) was applied with keywords including *cancer, family, caregiver, quality of life*, *productivity*, and *financial toxicity*. Following title, abstract, and full-text screening, 24 studies met the inclusion criteria and were analyzed using a comparative-critical synthesis approach. **Results:** The synthesis revealed that caregiving burden is a major determinant of reduced family quality of life, particularly in physical, emotional, and social domains. Psychological distress including anxiety, depression, and fatigue served as a significant mediator between caregiving burden and reduced well-being. Financial toxicity resulting from treatment costs and loss of work productivity further exacerbated these effects, especially in low- and middle-income countries. Conversely, protective factors including family resilience, perceived social support, and high-quality interpersonal relationships were consistently associated with lower perceived burden and better quality of

life. **Conclusion:** Cancer caregiving generates cascading consequences on family well-being, mediated by psychological distress and economic strain. A family-centered care approach that integrates routine caregiver screening, psychosocial support, resilience-building interventions, and financial protection policies is urgently needed to improve outcomes for both patients and their families.

Keyword : Cancer; caregiver burden; family caregivers, financial toxicity; productivity; quality of life

Introduction

Cancer is a group of diseases characterized by uncontrolled abnormal cell growth, invasive potential, and the capacity to metastasize to distant organs through complex genetic and epigenetic alterations that disrupt cell cycle regulation, inhibit apoptosis, and promote angiogenesis.[1] Globally, cancer has become one of the most formidable public health challenges. According to the GLOBOCAN 2022 report, approximately 20 million new cancer cases and 9.7 million cancer-related deaths occurred worldwide, with lung, breast, colorectal, prostate, and gastric cancers being the most prevalent.[2] The global cancer burden is projected to exceed 35 million new cases annually by 2050, particularly in low- and middle-income countries (LMICs), driven by population growth, aging demographics, and persistent disparities in healthcare access.[3]

Cancer severity is clinically classified using the TNM staging system (I–IV), which evaluates tumor size, lymph node involvement, and distant metastasis. Early-stage cancers generally carry a favorable prognosis and respond well to localized therapy, whereas advanced-stage malignancies often require complex multimodal approaches including surgery, chemotherapy, radiotherapy, targeted therapy, immunotherapy, hormonal therapy, and palliative care and are associated with significantly higher mortality.[4] Beyond the direct physiological burden, cancer patients frequently experience chronic pain, debilitating fatigue, nausea, functional decline, psychological disturbances, and restrictions in daily activities. Consequently, most patients depend heavily on family members for long-term physical, emotional, logistical, and financial support throughout their illness trajectory.[5]

The role of family caregivers in cancer care is indispensable; however, it is frequently accompanied by profound multidimensional consequences. Accumulating evidence indicates that caregivers of cancer patients are at elevated risk of diminished quality of life, psychological stress, anxiety, depression, sleep disturbances, social isolation, and severe economic hardship due to treatment-related expenses and lost employment.[6–8] The extended

time required for patient accompaniment, continuous monitoring, and prognostic uncertainty substantially amplifies the perceived caregiving burden. Importantly, caregiver well-being directly influences the quality of patient care, treatment adherence, and overall oncological outcomes.[9] Despite this recognition, the comprehensive impacts on family caregivers specifically regarding quality of life, productivity, and economic stability remain underexplored in many healthcare systems. This narrative review, therefore, aims to synthesize and critically evaluate existing evidence on the family-level consequences of cancer, identifying key mediators, protective factors, and implications for family-centered oncology care.

Material and Methods

This study employed a narrative review approach to comprehensively examine the impact of cancer on family caregivers across three domains: quality of life, productivity, and economic burden. A systematic literature search was performed across five electronic databases: PubMed, ScienceDirect, Springer Nature, Oxford Academic, and Google Scholar, covering publications from January 2020 to June 2026. The search strategy utilized Boolean operators (AND, OR) with the following keyword combinations: (*cancer* OR *neoplasm* OR *oncology*) AND (*family* OR *caregiver* OR *household*) AND (*quality of life* OR *HRQoL*) AND (*productivity* OR *employment* OR *work productivity*). Additional terms, including *financial toxicity* and *economic burden*, were incorporated to expand retrieval of economic outcomes.

Inclusion criteria were: (1) peer-reviewed original research, systematic reviews, or meta-analyses; (2) full-text availability; (3) publication in English or Indonesian; (4) publication date between 2020 and 2026; and (5) explicit discussion of cancer-related impacts on family members or caregivers. Exclusion criteria comprised: (1) non-peer-reviewed articles, conference abstracts, or opinion pieces; (2) studies focusing exclusively on patient outcomes without caregiver data; (3) duplicate publications; and (4) studies on non-oncological chronic diseases.

Titles and abstracts were independently screened for relevance, followed by full-text review of potentially eligible articles. The final synthesis included 24 studies comprising quantitative cross-sectional designs, qualitative investigations, and systematic reviews. Data extraction focused on study characteristics, caregiver outcomes, and identified mediators or protective factors. A comparative-critical synthesis approach was applied to identify convergent patterns, contextual differences, and knowledge gaps across studies.

Results

Caregiving Burden and Its Correlation with Quality of Life

Across all included studies, caregiving burden emerged as a consistent global phenomenon, albeit with intensity variations based on disease stage and geographical setting. In Iran, family caregivers of cancer patients reported moderate-to-high burden levels, with longer caregiving duration and advanced cancer stage identified as major aggravating factors.[10] Similarly, a study from Luxembourg confirmed that caregivers of patients with advanced cancer experienced significant burden, with broad negative implications for their well-being.[11] Cross-study analysis revealed a robust negative correlation between caregiver burden and health-related quality of life (HRQoL); escalating burden corresponded to significant reductions in caregivers' physical, emotional, and social functioning scores.[12]

Psychological Distress and Resilience Mechanisms

Psychological distress constituted a dominant theme. Caregivers of adolescents and young adults (AYA) with cancer reported substantial anxiety, depression, and unmet supportive care needs, which were closely linked to their perception of the patient's prognosis.[13] Similarly, caregivers of patients with multiple myeloma demonstrated high psychological distress, further compounded by prognostic uncertainty and treatment complexity.[14] Family resilience functioned as a critical protective factor. Studies consistently showed that resilience moderated the negative effects of caregiving burden on quality of life; caregivers with higher resilience scores were better able to preserve psychological well-being despite demanding caregiving conditions.[15] Furthermore, latent profile analysis among families of children with cancer revealed substantial heterogeneity in resilience profiles, indicating that family adaptive capacities are not uniform and require individualized assessment.[16]

Financial Toxicity and Work Disruption

Economic consequences were prominently reported, particularly in LMICs. Among patients with gynecological cancer in Nigeria, severe financial toxicity was identified as a major predictor of lower HRQoL.[17] This economic strain was compounded by employment disruption among family caregivers. In early-stage breast cancer cases, caregivers frequently experienced career interruptions, including reduced working hours, job changes, or complete workforce withdrawal, which directly exacerbated overall family financial distress and diminished caregiver well-being.[18]

Relationship Quality and Psychosocial Support

The quality of the caregiver-patient relationship demonstrated a dual role. High-

quality, emotionally supportive relationships buffered against perceived burden, whereas conflict, poor communication, or emotional distance among families of patients with terminal cancer increased the caregiving burden.[19],[20] Peer support interventions, particularly those delivered by cancer survivors, effectively enhanced patient motivation and indirectly alleviated caregivers emotional strain.[21] Moreover, unmet psychosocial support needs were consistently reported among both older adult patients and their family caregivers, underscoring an urgent requirement for integrated supportive services.[22]

Discussion

Mediating Mechanisms between Burden and Quality of Life

The synthesized evidence strongly indicates that the relationship between caregiving burden and quality of life is significantly mediated by psychological distress. Caregiver burden does not merely exert a direct negative effect; it also operates indirectly through elevated stress, anxiety, depressive symptoms, emotional exhaustion, and fatigue.[23] The more prolonged and intense the caregiving role, the greater the psychological strain, which subsequently impairs physical, emotional, social, and functional well-being. This mediated pathway is consistent with the stress-appraisal-coping model, wherein caregiving demands are filtered through caregivers' cognitive appraisals and available coping resources.[24]

Protective Role of Resilience and Social Support

Family resilience emerged as a central moderating variable capable of weakening the negative pathway between burden and quality of life. Caregivers who demonstrated robust social support networks, adaptive coping strategies, effective emotional regulation, and strong family cohesion were more likely to sustain acceptable quality of life despite escalating caregiving responsibilities.[25] This finding aligns with the resiliency model of family stress, which posits that family strengths and resources determine adaptation to adverse events.[26] Clinically, these observations suggest that interventions should extend beyond reducing physical caregiving tasks to strengthening caregivers psychological resources, coping mechanisms, and social connectedness. Resilience-based interventions including structured counseling, psychoeducation, cognitive behavioral therapy, and peer support groups should be integrated as core components of comprehensive cancer care.

Financial Toxicity as a Compounding Stressor

The discourse on caregiver quality of life is inseparable from economic context, particularly in LMICs. Financial toxicity stems from the cumulative burden of direct treatment costs, transportation, accommodation, loss of household income, and reduced

productivity.[27] These multifaceted expenses often force families into devastating trade-offs, including depletion of savings, asset liquidation, borrowing, treatment delays, or even discontinuation of therapy. The interplay between financial strain and psychological distress creates a vicious cycle, where economic hardship exacerbates anxiety and depression, which in turn impairs functional capacity and work performance.[28] Therefore, medical support alone is insufficient. Integrated interventions must combine psychosocial care including counseling, cognitive-behavioral approaches, and peer support with structural financial protection mechanisms such as health insurance optimization, social assistance, workplace accommodations, transportation subsidies, and financial navigation services. Recognizing caregivers as "hidden patients" is essential, as their unmet health needs can lead to long-term adverse outcomes for both themselves and the care recipients.[29]

Life-Stage and Relationship-Based Approaches

The reviewed literature demonstrates that caregiver needs vary significantly according to age, family role, cancer type, disease stage, and prognosis. Caregivers of adolescent and young adult (AYA) patients face unique developmental burdens, as caregiving responsibilities often interfere with education, career establishment, social maturation, and future life planning.[13] Meanwhile, parents of childhood cancer survivors continue to experience long-lasting psychological and quality-of-life repercussions even after treatment completion.[30] These findings underscore that caregiver support cannot adopt a one-size-fits-all strategy but must instead be developmentally tailored and stage-appropriate.

The quality of the caregiver-patient relationship also critically shapes the caregiving experience. Supportive, harmonious relationships reduce perceived burden, enhance emotional adjustment, and promote cooperative treatment engagement. Conversely, family conflict, communication breakdowns, and emotional distance amplify caregiver stress and reduce care effectiveness. Interventions that improve communication, shared decision-making, emotional openness, and family harmony represent high-yield, non-pharmacological strategies to mitigate caregiving burden.[31]

Implications for Family-Centered Cancer Care

The collective evidence strongly supports the adoption of a family-centered care model in oncology services. Cancer care should not exclusively focus on tumor response or patient survival but must holistically address the psychosocial, economic, and functional consequences experienced by family caregivers. Routine clinical assessment of caregiver burden, psychological distress, sleep quality, work disruption, and financial strain should become standard practice. Early identification of high-risk caregivers through validated

screening tools (e.g., Zarit Burden Interview, Hospital Anxiety and Depression Scale, COST-FACIT) would enable timely, targeted support before burden becomes severe.[32]

Healthcare providers must deliver clear, empathetic, and truthful information regarding diagnosis, prognosis, treatment plans, potential side effects, and available support services. Transparent communication reduces uncertainty and prepares families emotionally, practically, and financially for the journey ahead.[33] Moreover, interdisciplinary collaboration among oncologists, nurses, psychologists, social workers, palliative care teams, and financial counselors is imperative to ensure both patients and caregivers receive holistic, continuous support throughout the cancer trajectory. Healthcare policies must formally recognize family caregivers as an integral component of the care team, rather than as informal or secondary actors. Such recognition carries implications for labor policies (e.g., paid family leave, flexible working arrangements), financial protection (e.g., tax relief, subsidies), and inclusion in care planning and decision-making processes.

Conclusion

This narrative review demonstrates that cancer generates complex and enduring consequences that extend far beyond the patient, profoundly affecting family caregivers across quality of life, psychological health, work productivity, and economic stability. Caregiving burden directly and indirectly reduces family well-being, with psychological distress and financial toxicity acting as critical mediators. Conversely, family resilience, perceived social support, and high-quality interpersonal relationships serve as protective factors that mitigate negative outcomes. Therefore, cancer management must evolve toward a comprehensive family-centered care model that incorporates routine screening of caregiver well-being, accessible psychosocial support, effective communication strategies, and structural financial protection policies. Healthcare systems must formally recognize family caregivers as integral members of the oncology care team, ensuring their needs are addressed alongside those of patients. By strengthening caregiver well-being, we can simultaneously improve patient outcomes, treatment adherence, family adaptation, and overall care sustainability a strategic investment in both individual and public health.

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