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Original Research Article

Predictors of quality of life among informal caregivers of patients with advanced cancer in palliative care: a cross-sectional study

Eranthi Weeratunga[1]*, Sampatha Goonewardena[2,3], Lalitha Meegoda[4]

[1]Department of Nursing, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka
[2]Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka
[3]Non-Communicable Disease Research Centre, University of Sri Jayewardenepura, Nugegoda, Sri Lanka
[4]Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka

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***Correspondence:**
Eranthi Weeratunga,
E-mail: eranthiw@ahs.ruh.ac.lk

ABSTRACT

Background: Family members and informal caregivers (ICs) have been suffering many problems, issues, and burdens, which impact the quality of life (QoL). Improving the QoL of ICs is a key aspect of palliative care (PC). This study aimed to determine the predictors of QoL among ICs of patients with advanced cancer in PC.

Methods: This cross-sectional study included 422 ICs who were selected conveniently and attended the PC unit and clinics at Apeksha Hospital, Maharagama, Sri Lanka. An interviewer-administered questionnaire, which included socio-demographic and clinical characteristics, was used to collect data. QoL of ICs was assessed using the validated WHOQOL-BREF scale; higher scores indicated higher QoL. Descriptive and inferential statistics were used.

Results: The mean±SD age of the ICs was 43.13±14.92. The majority of ICs and patients were female. The mean WHOQOL-BREF domain scores of ICs were 26.56±12.30 for physical health, 20.64±3.23 for psychological status, 10.03±1.60 for social relations, and 24.76±3.72 for the environmental domain. Predictors of QoL among ICs were age ($p<0.01$), religion ($p<0.01$), education ($p<0.05$), family income ($p<0.01$), care level ($p<0.01$), physical illnesses ($p<0.01$), emotional strain ($p<0.05$), self-reported general health ($p<0.01$), medical conditions ($p<0.05$), psychological conditions ($p<0.01$), comorbidities ($p<0.05$), and family/friend support ($p<0.05$).

Conclusions: The physical QoL was considerably high, while all domains among ICs were impaired. It is recommended to consider the predictors of QoL of ICs comprehensively who live in third-world developing countries. Sri Lankan healthcare professionals must ensure that ICs have overall well-being and receive the proper support/resources to care for their patients.

Keywords: Advanced cancer, Family/informal caregivers, Palliative care, Quality of life, Sri Lanka, WHOQoL-BREF

INTRODUCTION

Cancer is a growing global health issue with an estimated 40 million people requiring palliative care (PC) annually.[1-3] However, nearly 80% of these patients are mostly in low- and middle-income countries (LMICs), and do not receive satisfactory PC.[4] Cancer faces various global challenges in receiving proper care and tends to have a longer duration due to the lack of a cure. However, it can be detected early and treated with advanced modalities and supportive care.[5] Cancer remains largely incurable, making quality of life (QoL) a key focus of care. 'QoL' is defined as an individual's perception of their position in life within their cultural and value context, considering their goals, expectations, and standards.[6] The World Health Organization (WHO) emphasizes PC as a fundamental human right, addressing not only physical pain but also psychosocial and spiritual well-being.[7,8] Globally, the burden of cancer continues to rise with demographic changes and the increasing prevalence of non-communicable diseases (NCDs).[8]

Developed nations generally have well-established, advanced, and integrated PC systems. This is why PC is incorporated and included in the National Strategic Plans and healthcare (HC) systems of most countries.[7,9,10] Patients in these settings often benefit from early detection, advanced treatment modalities, and strong support services.[7] Informal caregivers (ICs) in these countries may experience varied QoL outcomes, with some studies showing no significant differences in caregiver QoL with early PC, while others highlight improved satisfaction and support.[8,11-13] ICs have many caregiving duties and responsibilities, and provide care for their patients regardless of the HC setting, such as in hospitals, clinics, primary care facilities, hospices, nursing homes, home care, and more. However, PC is also associated with negative consequences, including various stresses that affect physical and psycho-social well-being, such as caregiver burden/strain, psychological distress (PD), depressive symptoms (DS), anxiety, and fatigue; those with low resilience are at greater risk of developing these issues.[14] As a cancer patient's health declines, the caregiving burden and distress increase, and responsibilities also grow, which significantly impacts their QoL.[15] Like cancer patients, caregivers have essential needs that must be met while caring for patients; unmet needs of ICs can also worsen their QoL can also impact all aspects of QoL among ICs, and further cause increased financial problems, associated with lower social and family support.[16-18]

In LMICs, despite higher cancer prevalence and NCD-related deaths, access to PC remains limited or absent; barriers include inadequate infrastructure, poor awareness, a lack of trained staff, and limited technical support for caregivers.[7,19] Most patients and families face challenges in accessing home-based PC, which remains underdeveloped.[7,9,10] ICs in LMICs often struggle with high caregiver burden, PD, financial difficulties, and limited social support, all of which negatively affect QoL as mentioned earlier.[14] Sri Lanka reflects challenges seen in other LMICs. Cancer cases have increased significantly, from 31,848 in 2019 to 37,753 in 2021, while PC has been included in national strategic health plans in Sri Lanka too; however, progress is slow, with few inpatient facilities and limited home-based services supported by non-government organizations and hospitals.[2,3,7,9,10] Studies in Sri Lanka highlight gaps in information delivery, awareness, and healthcare professional (HCP) support for caregivers.[7,19] Evidence shows mixed findings on caregiver QoL, and others identify poor physical and psychological outcomes.[20-22] Limited research underscores the urgent need for more studies to strengthen PC services and caregiver support in the country, to improve QoL.

Objective

Therefore, this study aimed to address this gap by assessing the QoL and identifying predictors of QoL among informal caregivers of patients with advanced cancer in Sri Lanka, which has not been extensively explored recently. The findings will be vital for improving the QoL of both caregivers and patients, offering a cost-effective way to enhance HC quality in an LMIC setting.

METHODS

Study design and setting

This descriptive cross-sectional study (following STROBE guidelines) was done in the main oncology facility in Sri Lanka, Apeksha Hospital, Maharagama (AHM) (previously named National Cancer Institute Sri Lanka) is administered by the Government of Sri Lanka. AHM has over 20 wards and 800 beds. Patients with different cancer types around the country receive all preventive and curative services; all services are available for both adult and paediatric patients with cancer, free of charge.

Both medical and surgical clinics related to cancers are held in the AHM, such as oncology/onco-medical and onco-surgical; in addition, separate hemato-oncology and pediatric oncology clinics are available. Gynecology, dermatology, cardiology, hematology, and medical clinics are available at the AHM. Especially, pain management and palliative care clinics are available. Further, many clinics/wards related to the different specialties are available; oncology-chemotherapy, oncology-radiotherapy, iodine ward, hemato-oncology, bhikku ward for monks, pediatric, and gynecology. There are different units such as the surgical intensive care unit, pediatric intensive care unit, medical intensive care unit, bone-marrow transplant unit, emergency treatment unit, chemotherapy unit, pediatric chemo unit, palliative care unit, and dialysis unit. further, the counselling unit and the physicist/radiotherapist are available.

Study participants

The study sample consisted of 422 ICs of patients with advanced cancer (e.g., confirmed stage III, IV, or recurrence, including any advanced cancer) who attended consultations or clinics at the PC unit, onco-medical or onco-surgical clinics.[23]

The sample was conveniently selected using several inclusion criteria (e.g., ICs who were 18 years or older with a good understanding of the Sinhala or English language, and caring currently for patients with any type of advanced cancer for more than three months) and exclusion criteria (e.g., adult ICs who were providing care for patients with critical conditions due to advanced cancer or other co-morbidities, who have attended training related to caring or were employed/paid, and who physically/mentally disabled or had a history of mental disorders diagnosed by psychiatrists), to obtain needy information from the ICs without any issues for ICs and respective patients.

Participant recruitment

This study was approved by the ethics review committee, faculty of medical sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka (ERC 49/22). After obtaining institutional approval, ICs were invited to participate in this study. After the investigator had gone over the objectives and purposes of the study, ICs signed an informed consent form after reading the information sheet. After obtaining the willingness of ICs, the principal investigator (PI) recorded their names and addresses in a separate register maintained by the study team, in addition to the clinic appointment register. Later, the serial number was given to all ICs after cross-checking personal details. Throughout the study, participant confidentiality and anonymity were assured, and all questions were coded numerically to maintain privacy.

Data collection

A pre-tested, interviewer-administered questionnaire (IAQ) was used for the data collection in February-May 2024. It comprised socio-demographic details of ICs, care recipients, and clinical characteristics of ICs and care recipients. Further, a validated Sinhala version of the WHOQOL-BREF questionnaire was used to assess the QoL of ICs. The WHOQOL-BREF is a 26-item scale that includes four domains and several items: physical (seven items), psychological (six items), social (three items), and environmental (eight items).[24] The scale was evaluated according to the guidelines developed by the WHO. Scores for each domain were calculated separately, as each domain independently expressed the QoL within its content, as in the manual; the higher values indicated a higher level of QoL.[24] The scale WHOQOL-BREF has been validated in Sri Lankan settings and used freely in many studies.[25]

Statistical analysis

Data analysis was done using SPSS version 25.0. The level of significance was accepted at $p<0.05$. Basic descriptive statistics (frequencies, means, and standard deviations) were used to describe the socio-demographic characteristics and the distribution of responses.

Further, independent samples t-test, Chi-square, and one-way analysis of variance (ANOVA) were used to find an association between variables. Multiple linear regression analysis was performed to investigate the impact of different variables on the QoL domains and overall QoL; multiple stepwise linear regression was conducted to examine factors predicting the QoL of ICs.

RESULTS

Characteristics of the informal caregivers

In this study, 422 ICs were enrolled (response rate 100%). The mean±SD age of the ICs was 43.13±14.92 years (age range 18-80). The characteristics of ICs are summarized in Tables 1 and 2.

Table 1: Socio-demographic profile of ICs (n=422).

Characteristics/variables	Categories	N	%
Age (years)	18-38	180	42.7
	39-59	171	40.5
	60-80	71	16.8
Gender	Male	205	48.6
	Female	217	51.4
Marital status	Married	343	81.3
	Unmarried/Single	77	18.2
	Separated/divorced	02	1.5
Ethnicity	Sinhala	390	92.4
	Tamil	18	4.3
	Muslim	14	3.3
Religion	Buddhist	363	86.0
	Hindu	05	1.2
	Islam	13	3.1
	Christian	26	6.2
	Catholic	15	3.6
Education	No schooling/illiterate	03	0.70
	Grade 1 - Grade 5	46	10.9
	Grade 6-12	324	76.8
	Diploma	20	4.7
	Degree	29	6.9
Family monthly income/per month (LKR)	≤5000	40	9.5

Continued.

Characteristics/variables	Categories	N	%
	5001-10,000	123	29.1
	10,001-49,999	165	39.1
	50,000-99,999	76	18.0
	≥100,000	18	4.3
Working status	Currently working	228	54.0
	Currently not working	194	46.0
Occupation (engaged before or currently doing)	No occupation	173	41.0
	Not mentioned	09	2.1
	Retired	09	2.1
	Pensioner	08	1.9
	Non-skilled worker/ Laborer	45	10.7
	Skilled worker	52	12.3
	Self-employer	20	4.7
	Farming	05	1.2
	Driving	23	5.5
	Military personals	12	2.8
	Business	11	2.6
	Teaching	10	2.4
	Private workers	14	3.3
	Government workers	20	4.7
	Bank officers	05	1.2
	Engineer	02	0.5
	Healthcare workers	04	0.9
Perceived social support (SS)	None	09	2.1
	Poor	64	5.2
	Moderate	179	42.4
	Strong	170	40.3
Perceived family/friend support (FFS)	I do not need any help	05	1.2
	Receive no help	17	4.0
	Less help than needed	175	41.5
	Received what I need	225	53.3
Total time spent caregiving	≤3 years	227	53.8
	≥3 years	195	46.2
Weekly time spent caregiving (hours)	72-90	217	51.4
	91-109	184	43.6
	110-128	21	5.0
Total time spent sleeping/per day (hours)	1-3	2	0.5
	4-6	392	92.9
	7-9	28	6.6
Changes of work/job due to caregiving	No change	269	63.7
	Changed job	07	1.7
	Increased working hours	03	0.7
	Decreased working hours	107	25.4
	Resigned/temporarily left	14	3.3
	Discontinued education	16	3.8
	Other reason	06	1.4
Caregiver relationship to care recipient (relationship with the patient)	Husband/wife/spouse	84	19.9
	Child	24	5.7
	Sister	67	15.9
	Brother	16	3.8
	Cousin brother/sister/ uncle/ aunty	16	3.8
	Mother/mother-in-law	134	31.8
	Father/father-in-law	69	16.4
	Grandmother/grandfather	08	1.9
	Neighbor/friend	04	0.9
Living arrangements (resides with care recipient)	Living with family/patient	280	66.4
	Living separately	142	33.6
Levels of care	Day-to-day hands-on care	88	20.9
	Intermittent hands-on care	172	40.8
	Rare care	162	38.4

Table 2: Care burden of ICs (n=422).

Characteristics/variables	Categories	N	%
Consequences of caregiving			
Physical illnesses	Yes	113	26.8
	No	309	73.2
Financial strain	Yes	334	79.1
	No	88	20.9
Emotional strain	Yes	346	82.0
	No	76	18.0
Self-reported general health (SGH)	Very good	100	23.7
	Good	192	45.5
	Fair	78	18.5
	Poor	52	12.3
Chronic disease conditions			
Medical conditions	Yes	83	19.7
	No	339	80.3
Surgical conditions	Yes	14	3.3
	No	408	96.7
Psychological conditions	Yes	04	0.9
	No	418	99.1

Table 3: Descriptive statistics of the WHOQOL-BREF scores of ICs.

Domains	Mean±SD	CI 95% of Mean	Range (Min-Max)
Physical	26.56±12.30	26.14; 26.98	24 (11-35)
Psychological	20.64±3.23	20.33; 20.95	22 (8-30)
Social	10.03±1.60	9.87; 10.18	11 (4-15)
Environmental	24.76±3.72	24.40; 25.11	28 (12-40)

Results are expressed as mean (standard deviation). CI- confidence interval of mean; SD- standard deviation; WHOQOL-BREF- World Health Organization Quality of Life-Brief scale

Table 4: Descriptive statistics (mean±SD) of QoL domains and associated factors of ICs.

Variables	Physical QoL	Psychological QoL	Social QoL	Environmental QoL
Age (years)				
≤55 (n=327)	27.36±3.78	21.03±3.01	10.19±1.59	24.96±3.54
>55 (n=95)	23.81±5.18	19.29±3.60	9.47±1.50	24.04±4.21
P value	<0.01	<0.01	<0.01	0.05
Gender				
Male (n=205)	26.49±4.40	20.84±3.15	10.00±1.53	24.71±3.57
Female (n=217)	26.64±4.38	20.46±3.31	10.05±1.67	24.80±3.86
P value	0.73	0.22	0.75	0.79
Working status				
Currently working (n=228)	27.05±4.07	20.98±3.16	10.11±1.60	24.93±3.61
Not working (n=194)	25.99±4.68	20.25±3.28	9.92±1.60	24.55±3.83
P value	<0.05	<0.05	0.22	0.30
Period of caregiving				
≤3 years (n=227)	26.68±4.29	20.77±3.31	10.06±1.65	25.08±3.88
>3 years (n=195)	26.43±4.50	20.49±3.14	9.98±1.55	24.37±3.49
P value	0.57	0.38	0.62	0.05
Comorbidities				
Yes (n=73)	23.41±5.04	19.15±4.09	9.66±1.93	23.84±4.41
No (n=349)	27.22±3.94	20.95±2.94	10.10±1.51	24.95±3.53
P value	<0.01	<0.01	<0.05	<0.05

Results are expressed as mean (Standard deviation). A t-test was used for the analysis. The test is significant if $p<0.05$

Table 5: Predictors of the overall QoL of ICs.

Model	Predictors	Unstandardized Coefficients		Standardized coefficients	t	P value	95.0% confidence interval for B	
		B	Std. error	Beta			Lower bound	Upper bound
Overall QoL	Age (years)	-0.21	0.05	-0.25	-4.20	<0.01	-0.31	-0.11
	Religion	-1.24	0.51	0-.11	-2.44	<0.01	-2.23	-0.24
	Education	1.59	0.77	0.09	2.05	<0.05	0.07	3.11
	Family income	2.11	0.53	0.17	3.97	<0.01	1.07	3.16
	Care level	4.09	0.65	0.25	6.28	<0.01	2.81	5.37
	Physical illnesses	3.31	1.21	0.12	2.75	<0.01	0.94	5.68
	Emotional strain	3.10	1.78	0.12	2.25	<0.05	0.50	7.49
	SGH	-3.27	0.57	-0.25	-5.78	<0.01	-4.39	-2.16
	Medical conditions	-5.90	2.43	-0.19	-2.43	<0.05	-10.68	-1.13
	Psychological conditions	18.49	5.02	0.15	3.68	<0.01	8.61	28.36
	Comorbidities	5.26	2.53	0.16	2.08	<0.05	0.28	10.24
	FFS	2.03	0.96	0.10	2.12	<0.05	0.15	3.91

FFS- Family/friends support; SGH- Self-reported General Health. Note. Multiple linear regression was conducted for each QoL domain and overall QoL (shown only the overall QoL); Overall QoL- R^2=0.49, F (14.02) =9.08, Test is significant if p<0.05.

Most of the ICs were currently working (54.0%) and engaged as skilled and non-skilled workers by their occupation. The self-reported financial (79.1%) and emotional strain (82.0%) were higher among many ICs (Table 2).

Characteristics of patients with advanced cancer/care recipients

The mean±SD age of these patients with cancer was 57.90±12.22 years (age range 18-87). Of the sample, 44.1% were represented by the patients in the 50-65-year age group, and 70.4% were females. The most common primary cancer diagnosis in this study was breast cancer (n=100, 23.7%).

The QoL of ICs

Table 3 exhibits the descriptive features of QoL domains, such as general, physical, psychological, social, and environmental QoL of the WHOQOL-BREF scale. Altogether, four domains represented lower QoL according to the scoring system of WHOQOL-BREF; the physical QoL reported the highest mean±SD score compared to all domains.

Clinicodemographic and caregiving-related variables of ICs and patients' factors were analyzed to find any significant relationship between QoL domains among ICs. ICs who were lower than 55 years of age, currently working, and had no comorbidities reported a higher mean±SD QoL for all domains compared to ICs who were of older ages, currently not working, and who had comorbidities (Table 4). Some variables, such as age and working status, significantly impacted some QoL domains. Comorbidities of ICs significantly influenced all QoL domains, while the gender of the ICs was not influenced.

The study performed the ANOVA to compare the effect of independent variables on physical, psychological, social, and environmental QoL (dependent variables). A statistically significant association was found between marital status and physical QoL (p<0.01), and no differences in psychological, social, and environmental QoL were found in marital status. Further, significant associations were found between religion, psychological (p<0.01), and environmental QoL (p<0.01)

Furthermore, statistically significant associations were reported between education, family income, and care level of ICs and all QoL domains (p<0.01). Psychological, social, and environmental QoL domains were significantly influenced by the employment status (p<0.01). Most of the ICs stayed with their family members at home, like parents, children, grandparents, grandchildren, and/or sisters/brothers (married/ unmarried), such as extended families.

Among them, some variables were significantly associated with different QoL domains: parents and physical QoL, grandchildren, sisters/brothers, psychological QoL, grandparents, sleeping hours/day, and social QoL, caregiving hours/week, and environmental QoL, physical illnesses and physical-psychological-social QoL, financial strain, emotional strain, and psychological-social-environmental QoL. However, children living with or without the patient had no significant impact on any QoL domain of ICs.

Predictors of physical, psychological, social, and environmental QoL among ICs

As mentioned above, many variables of ICs showed significant associations with QoL domains. Multiple stepwise linear regression was applied to all domains, and many characteristics of ICs were identified as predictors of different QoL domains.

ICs' age, gender, family income, care level, physical illnesses, SGH, medical conditions, psychological conditions, and comorbidities significantly predicted the physical QoL. Among all variables, psychological QoL was significantly predicted by age, religion, education, family income, care level, physical illnesses, emotional strain, SGH, medical conditions, psychological conditions, and FFS. ICs' age, family income, caregiver relationship, care level, financial strain, psychological conditions, and FFS predicted the social QoL. Environmental QoL was significantly predicted by ICs' age, education, family income, care level, financial strain, SGH, medical conditions, psychological conditions, comorbidities, and FFS. Among all variables of the patient, only gender significantly predicted the physical QoL (data not shown).

Predictors of the overall QoL of ICs

The significant predictors of the overall QoL are depicted in Table 5. These predictors of the overall QoL were mostly similar to the predicting factors of other QoL domains, such as ICs' age, religion, education, family income, care level, physical illnesses, emotional strain, SGH, medical conditions, psychological conditions, comorbidities, and FFS of ICs.

DISCUSSION

This study examined QoL and its predictors among informal caregivers (ICs) of patients with advanced cancer receiving palliative care (PC) in Sri Lanka. Findings revealed a considerable decline in overall QoL, with the greatest reduction in social health, while physical QoL remained comparatively higher.[21] Predictors of QoL included age, religion, education, family income, care level, comorbidities, emotional strain, self-reported general health (SGH), medical/psychological conditions, and family/friend support (FFS), consistent with other studies.[11,15] Patient-related factors (e.g., age, gender, cancer type) were not predictors of caregiver QoL in this study, interestingly. However, education, marital status, family support, comorbidity, and feeling alone were identified as predictors for QoL in another Sri Lankan study.[21]

Globally, research on QoL among ICs during or receiving PC remains limited compared with studies on patients with advanced cancer, and especially not in PC.[11,12,15,20,25] In Sri Lanka, such evidence is scarce. A Philippine review reported only 22.7% of PC research focused on optimizing comfort and QoL.[26] Lower awareness and utilization of PC in LMICs remain major barriers.[27] Studies in developed countries show that quality PC enhances caregiver QoL, while findings in some developing contexts are mixed.[111,15,16,28] Differences may be explained by variations in patient/caregiver characteristics, cultural contexts, caregiving hours, assessment tools, and care settings (in-patient vs. out-patient). Ng et al highlighted the need for standardized, validated tools for QoL measurement, as the use of diverse instruments (WHOQOL-BREF), EQ5D5L, CQOLC complicates comparisons.[11,12,15,20,27]

Duimering et al reported higher CQOLC scores (range 33-129) than in the present study, though Turkish research using WHOQOL-BREF found caregiver QoL closer to our findings.[11,15] In contrast, a Sri Lankan study in 2021-2022 reported a higher QoL (range 57-75) than in this study (range 10-27).[21] Differences likely reflect study periods, participant selection, and care contexts. In inpatient settings, ICs often share care responsibilities with health professionals. Developed countries have more facilities even for FCs, which could lead to higher QoL, unlike in Sri Lanka, where caregivers manage both patient and household tasks, influenced by cultural/religious norms and beliefs and extended family structures, and family bonds/inter-dependence when caring for patients at home.[11] Socio-economic decline in recent years may further explain lower QoL in the current study.[20,28]

As in other studies, caregiver stress and emotional strain were major contributors to reduced QoL, although it was not directly assessed in the current study.[10,12,19] Emotional strain was one predictor of lower QoL in the current study, coupled with financial hardship, physical illness, and comorbidities, which predicted lower QoL here, similar to findings from Turkey.[11,29] Financial strain was frequently reported during interviews, as caregivers struggled with daily expenses, treatment costs, and transportation, consistent with international evidence.[11] Psychological distress, depression, and anxiety also contribute to impaired QoL, especially as disease progression and impending death intensify caregiver burden.[30-32]

In this study, physical QoL was relatively higher, while social QoL was lowest, echoing earlier Sri Lankan research.[20] Contributing factors include the absence of major illnesses and good self-reported general health among ICs, which supported caregiving despite their older age. Many caregivers ignored their own health issues, considering caregiving a duty that enhanced self-esteem, as shown in prior work.[20,21] However, low social QoL likely reflected limited social support and FFS. The current study confirmed FFS as a key predictor of QoL, consistent with the Sri Lankan and international findings.[20,21,33] Extended family networks often strengthen coping, though economic challenges and emotional strain may impact social functioning.[21]

Although this study reported lower social QoL and overall QoL, it also noted that family members often provide higher social support (SS) to their patients, as seen in previous cancer studies involving patients in Sri Lanka.[34,35] However, that study did not focus on the support provided to family caregivers.

Other socio-demographic factors predicted QoL as well. Younger and better-educated ICs reported higher QoL, likely due to greater coping skills and fewer age-related health issues. Women often play multiple roles, including child-rearing and household tasks, with caregiving becoming an additional responsibility that can lower QoL.[28] Similar trends have been observed elsewhere, though some studies found no differences.[11] Religious practices were also important predictors. In Sri Lanka, religious devotion, particularly Buddhism, provides coping mechanisms and resilience, echoing findings from other Asian contexts.[35-37] Gender was not a predictor in this study, although female patients' gender predicted physical QoL, because of their higher representation in the sample.[21] Unlike in Turkey, Sri Lankan ICs did not report major employment disruptions from caregiving, possibly due to shared responsibilities in extended family systems.[11,34,35]

Cultural and family dynamics play a major role in shaping QoL.[21] In Sri Lanka, caregiving is primarily undertaken by daughters, daughters-in-law, or female spouses, consistent with traditional and religious norms.[11] Women often balance caregiving with household and financial responsibilities, a trend also seen in Turkey.[11] Extended families often provide support, but this study suggests their role in enhancing caregiver QoL is underexplored, as most research focuses on patient outcomes.[34,35] Ultimately, QoL among ICs is shaped by multiple interacting factors, including personal health, emotional strain, finances, family support, education, and cultural values.[21] Importantly, ICs often prioritize caregiving over their own needs, risking physical and psychological harm. High-quality PC services for patients and their families can mitigate suffering and improve QoL, especially in terminal stages.[38,39]

The one limitation of the current study was its design, a cross-sectional study; it would be more effective if the qualitative aspects were to establish the causality among variables. A longitudinal and qualitative design would have improved the generalization of results. IAQ also limited true explanations and opinions about ICs' concerns and suggested using a self-administered questionnaire rather than using IAQ. The way of data collection, many questions, and time may be an additional burden to ICs, and it may affect their caring time and leisure time.

CONCLUSION

It was detected that the majority of informal caregivers of patients with advanced cancer who received PC had impaired QoL. The QoL of the ICs was most affected in the social domain, followed by the psychological, environmental, and physical domains. To the best of our knowledge, this is the first study to examine the predictors of QoL among informal caregivers of patients with advanced cancer. Several socio-demographic and care-related factors are significantly associated with ICs' QoL and should be a focus of professional attention. ICs are vital to patient care but face burdens that threaten their well-being. Early support and nurse-led interventions can reduce unmet needs across all QoL domains to prevent them from becoming "another patient" with unmet needs, and future research should identify the most effective supportive strategies.

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