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The Role of Social Support in Quality of Life Among Older Cancer Survivors in Europe: A SHARE-Based Analysis

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Table of contents

List of acronyms

CASP-12: Control, Autonomy, Self-realization, Pleasure (12-item quality of life scale)

CASP-z: CASP-12 scale standardized by wave

QoL: Quality of Life

SHARE: Survey of Health, Ageing and Retirement in Europe

ISCED-97: International Standard Classification of Education, 1997 revision

ICC: Intraclass Correlation Coefficient

VIF: Variance Inflation Factor

SD: Standard Deviation

IQR: Interquartile Range

CI: Confidence Interval

Abstract

The number of older cancer survivors is growing across Europe. Despite improved survival, many face persistent declines in quality of life (QoL), influenced by health deterioration, functional limitations, and reduced social engagement. While social support is known to influence well-being, its role in cancer survivorship among older adults remains insufficiently examined.

This study investigated the association between social support and QoL among cancer survivors aged 50 and older using data from SHARE Waves 1-9. Quality of life was measured using the CASP-12 scale, standardized by wave (CASP-z). Functional support was defined as receiving help from others, and participatory support as frequent participation in clubs or social activities. Structural support was excluded due to multicollinearity with participatory support. Multivariable linear regressions and mixed-effects models were used to estimate associations, adjusting for sociodemographic, health, and country-level variables.

Receiving functional support was associated with a −0.155 SD decrease in CASP-z scores (95% CI: −0.174 to −0.137; $p < 0.001$). This association may reflect reverse causality, with lower quality of life increasing the likelihood of receiving help. In contrast, participatory support was positively associated with CASP-z. Frequent engagement in club or social activities was linked to a +0.096 standard deviation increase in CASP-z scores (95% CI: 0.068 to 0.123; $p < 0.001$), after adjustment for demographic, clinical, and contextual factors.

These findings suggest that functional support may reflect underlying vulnerability, such as health decline or dependency, rather than confer a direct benefit to well-being. Conversely, regular social engagement appears to have a meaningful, positive impact on survivors' quality of life. Policies and interventions promoting participatory support may help mitigate the "QoL deficit" observed among older cancer survivors.

Keywords:

cancer survivors, quality of life, social support, SHARE, aging, Europe

Introduction

Europe's population is ageing rapidly: as of 2023, more than one in five people in the European Union are aged 65 or older, and this proportion is projected to reach nearly one in three by 2050 as life expectancy rises and birth rates remain low (24). At the same time, advances in cancer treatment mean more people are living longer after a cancer diagnosis, with adults aged 65 and over now making up 62% of cancer survivors, defined as any person with a history of cancer, from the time of diagnosis throughout the rest of their life (28), in high-income countries, and this figure is expected to rise to 73% by 2040 (2). While these advances are cause for optimism, many older adults who have survived cancer still struggle with significant declines in their health-related quality of life. This is often due to the burden of other chronic illnesses, difficulties with daily activities, and feelings of social isolation (2, 3). In this context, the intersection of aging and cancer survivorship presents a unique public health challenge: even as survival rates improve, not everyone experiences better well-being or stronger social connections.

Social support is a broad concept, defined as the help, advice, and emotional comfort people receive from others in their lives (4). It can take many forms, from practical assistance like help with caregiving or finances, to having a strong social network, to being actively involved in community groups or clubs (5). These different aspects of support are important because research shows that when cancer survivors lack social support, they are much more likely to experience depression and have a higher risk of mortality (6, 7). This makes understanding and strengthening social support a key priority for improving the lives of older cancer survivors.

In the context of economics and social science, the concept of social capital is often used to describe the value that comes from social relationships and active participation in community life. Social capital encompasses both the support individuals receive from their social networks and their engagement in group activities, which together contribute to individual well-being and collective resilience (29). Studies have shown that higher social capital is associated with better health outcomes, including lower rates of depression and improved quality of life among older adults (29). For cancer survivors, strong social capital can provide access to resources, information, and emotional support, acting as a vital buffer against the negative consequences of illness.

To measure quality of life in older populations, many European researchers use the CASP-12 scale, which looks at four important areas: control over one's life, autonomy, self-realization, and the ability to enjoy life (8). Developed for use in the Survey of Health, Ageing and Retirement in Europe (SHARE), the CASP-12 scale is valued for its grounding in

sociological theories about what people need to thrive as they age (9). However, using the CASP-12 is not without challenges. For example, a 2015 SHARE study found that the autonomy domain had poor internal consistency, and some items, especially those about family responsibilities and finances, may not be reliable for all groups (10). Adding to this complexity, studies in countries like Portugal have found that cultural differences can affect how people answer questions about control and enjoyment, with some respondents less likely to report high autonomy or pleasure if their cultural background places more emphasis on family obligations (11). These issues are especially important when comparing results across different European countries, where social expectations and welfare systems can vary widely (12).

Despite these methodological issues, SHARE data consistently show large differences in quality of life among older cancer survivors across Europe. For instance, Greek survivors report CASP-12 scores that are 35% lower than those of their Danish contemporaries (13). Yet, surprisingly, few SHARE-based studies focus specifically on cancer survivors or take a detailed look at the different types of social support they receive. Most studies evaluate survivors together with non-cancer populations, making it hard to draw clear conclusions about what really matters for this group (14). This gap in the research was highlighted in a recent systematic review, which found that psychosocial needs, especially around social functioning, are the top concern for European cancer survivors (15).

The persistent gap between improved survival rates and declining quality of life among older European cancer survivors, sometimes called the “QoL paradox,” can be traced to several underlying problems. Recent OECD analyses highlight that cancer’s impact extends well beyond physical health, with significant negative effects on mental health and social well-being: across the OECD, cancer is estimated to cause an additional 160,000 cases of depression annually, and within the EU, an additional 85,000 cases per year, underscoring the profound psychosocial burden of survivorship (30).

First, there is a lack of coordinated policy: only 18% of EU member states have integrated psychosocial support into their national cancer plans, leaving many survivors without access to structured support programs (16). In Greece, for example, 42% of cancer survivors say they lack access to these services, which is closely linked to higher rates of isolation and depression (17). Globally, 34% of cancer patients report that psychological support is unavailable to them, even though 69% say they need it (18).

Second, research has often failed to address the specific needs of older cancer survivors. SHARE-based studies have tended to focus on economic and healthcare outcomes, overlooking the importance of emotional and social well-being (19). For example, while tools

like the Structural-Functional Social Support Scale (SFSS) can measure the size of a person's social network, they often miss the emotional or participatory aspects of support that are so important for quality of life (20). This narrow focus makes it harder to identify and address the unique vulnerabilities of aging cancer survivors.

Third, there are significant inequalities in resources across Europe, especially in Eastern Europe, where survivors are much more likely to face financial hardship and have limited access to social activities (21). The challenges of using the CASP-12 scale across different cultures can also make it difficult to accurately compare quality of life between countries. In places like Portugal and Italy, where family roles are highly valued, measurement biases may mask true differences in well-being (11, 22). As a result, interventions aimed at improving social support may not reach those who need them most, especially in low-income regions where functional limitations and financial stress are common.

These challenges are made worse by ongoing demographic changes. For example, 40% of older cancer survivors experience widowhood within five years of diagnosis, which can dramatically reduce their social support networks (23). Without targeted policy and research efforts, these gaps are likely to widen as Europe's population continues to age, by 2050, it is projected that 30% of Europeans will be 65 or older (24).

Against this backdrop, this thesis aims to better understand how different types of social support, functional, structural, and participatory, are linked to quality of life among older cancer survivors in Europe. By analyzing data from the Survey of Health, Ageing and Retirement in Europe (SHARE), this study seeks to inform policies and interventions that can help improve survivorship outcomes for an aging population.

This study addresses the question: How are functional, structural, and participatory social support associated with quality of life among older cancer survivors in Europe?

The objectives are to:

1. Describe changes in quality of life over time among older cancer survivors.
2. Assess the longitudinal association between social support and CASP-12 scores.
3. Evaluate whether functional, structural, and participatory support types have distinct effects on quality of life.
4. Examine cross-national variations in quality-of-life outcomes

The hypotheses are:

- **H1:** Higher levels of social support are associated with better quality of life among older cancer survivors.

- **H2:** Different types of social support (functional, structural, participatory) show distinct associations with quality of life.
- **H3:** Quality of life among older cancer survivors varies across European countries.

This thesis was conducted as part of an internship at the Organisation for Economic Co-operation and Development (OECD), within the Health Division. During the internship, multiple tasks were undertaken in support of the European Cancer Inequalities Registry and the development of the 2026 OECD flagship report on cancer. These included researching potential quality indicators, analyzing national and sub-national cancer data, and benchmarking performance against OECD averages and peer countries. The thesis project contributes directly to this broader initiative by examining the role of social support in quality of life among older cancer survivors, a theme that will be featured in the forthcoming flagship report. The research presented here reflects both an academic inquiry and a practical contribution to ongoing policy work on cancer inequalities across Europe.

Methods

This study draws on longitudinal panel data from the Survey of Health, Ageing and Retirement in Europe (SHARE), a cross-national survey that follows individuals aged 50 and older across multiple waves. The analysis focused on respondents who had reported a past diagnosis of cancer, excluding minor skin cancers. To ensure the longitudinal nature of the analysis, only individuals who participated in at least two waves were included. An exception was made for those diagnosed at baseline (Wave 1), who were retained even if they did not return for later waves, to avoid omitting long-term survivors captured early in the study.

The analytic sample was limited to countries with consistent availability of key variables across the relevant waves. Romania was excluded due to limited participation (one wave), and Israel was removed to maintain focus on European Union countries. The final dataset included cancer survivors from eligible SHARE countries who had complete responses on quality of life and social support variables in the relevant waves.

Table A. Variable Definitions and Construction		
Variable	**Definition**	**Construction / Coding**
Standardized CASP-12 (CASP-z)	Outcome variable measuring quality of life	Z-score standardized CASP-12 index across all waves
Received Help from Others	Functional social support	Binary: 1 = received help from others in past 12 months, 0 = did not
Club Participation Frequency	Participatory social support	Frequent = Almost daily/weekly; Infrequent = Monthly or less
Age	Age in years	Derived from interview year and birth year
Sex	Respondent's sex	Male or Female (1 = Male, 2 = Female)
Education Level (ISCED-97)	Educational attainment	Low = ISCED 0–2, Medium = ISCED 3–4, High = ISCED 5–6
Number of Comorbidities	Chronic condition count	Count of reported diagnosed diseases
Marital Status	Grouped marital status	In a relationship, Never, or Previously (based on `marital` variable recode)
Country	Country of residence	Standard SHARE country identifier
Wave	Survey wave number	Waves 1, 2, 4, 5, 6, 7, 8, 9 included in analysis
Cancer	Self-reported cancer diagnosis	Binary: 1 = reported cancer, 0 = no cancer
Cancer Site (Grouped)	Primary cancer site	Grouped as: Breast, Colorectal, Lung, Genitourinary, Gynecological, Other GI, Prostate, Other or Rare

Table A. Variable definitions and construction

Data Collection Procedures

Data from SHARE Waves 1 to 9 were used. However, only Waves 4, 6, 7, and 9 contained the Social Networks module needed to assess structural support. Functional and participatory support were available across all waves. Information on cancer history (PH006d1), social support, and quality of life (CASP-12) was collected through standardized computer-assisted personal interviews (CAPI). CASP-12, which covers control, autonomy, self-realization, and pleasure, was the primary outcome.

Social support was categorized into three dimensions:

- **Functional support:** Whether the respondent had received help from others (SP002_HelpFrom).
- **Participatory support:** Frequency of participation in clubs or group activities (AC036_5), recoded as frequent or infrequent.
- **Structural support:** Initially defined by contact frequency with up to seven confidants (SN007_1 to SN007_7) but excluded due to collinearity with participatory support.

Covariates included sex, age, education (ISCED-97), marital status, and a comorbidity index calculated as the number of chronic diseases reported, excluding cancer. All variables were harmonized across waves, and value labels were preserved for clarity.

Ethical Considerations

SHARE operates under strict ethical standards, in line with the Declaration of Helsinki and EU data protection laws. The study received ethics approval from the Ethics Council of the Max Planck Society and national boards in participating countries. All participants provided informed consent. This thesis is based on publicly available, anonymized data, and therefore did not require additional ethical approval.

Data Analysis

CASP-12 scores were standardized within each wave to produce z-scores (CASP-z), accounting for differences in response distributions across time. Descriptive statistics were computed for all key variables. Associations between CASP-z and each type of social support were tested using multivariable linear regression and linear mixed-effects models.

Although structural support was initially considered, it was excluded from the models due to high collinearity with participatory support and limited theoretical distinction. A total of eight models were estimated for each type of support (16 in total):

1. Base model: CASP-z ~ support + cancer site
2. Model 2: Base + age, sex, education, marital status, comorbidity count
3. Model 3: Model 2 + country fixed effects
4. Model 4: Model 2 + wave fixed effects
5. Model 5: Mixed-effects with individual and country random intercepts (base covariates)
6. Model 6: Model 5 + sociodemographic controls
7. Model 7: Model 6 + country fixed effects
8. Model 8: Model 6 + wave fixed effects

All analyses were conducted in R (version 4.4.1), using the lme4, lmerTest, and gtsummary packages.

Model Diagnostics

Standard diagnostic procedures were applied. For the linear models (Models 1–4), multicollinearity was assessed using Variance Inflation Factors (VIFs), with a threshold of 5. Residuals were checked for normality and constant variance using QQ plots and residual-versus-fitted plots.

Mixed-effects models (Models 5–8) were examined for convergence and singular fits. Intraclass Correlation Coefficients (ICCs) were computed to assess variance attributable to individuals and countries. Where necessary, simplified models with fewer random effects were used to maintain stability. Statistical significance was set at $p < 0.05$, and all results were reported using beta coefficients, 95% confidence intervals, and p-values.

Results

Descriptive Characteristics

Descriptive Statistics: Cancer Survivors (All Waves)	
Characteristic	**N = 56,780**[1]
Age	69 (62, 76)
Sex	
Female	30,927 (54%)
Male	25,853 (46%)
Education Level (ISCED-97)	
High	13,202 (23%)
Low	21,092 (37%)
Medium	22,051 (39%)
Number of Comorbidities	1.00 (0.00, 2.00)
Cancer Site	
Breast	4,383 (7.7%)
Colorectal	1,698 (3.0%)
Genitourinary	1,079 (1.9%)
Gynecological	1,288 (2.3%)
Lung	950 (1.7%)
Other GI	884 (1.6%)
Other or rare	43,452 (77%)
Prostate	3,046 (5.4%)
Marital Status	
In a relationship	39,307 (69%)
Never in a relationship	2,739 (4.8%)
Previously in a relationship	14,530 (26%)
Received Help from Others	9,744 (26%)
Club Participation Frequency	
Infrequent	3,416 (30%)
Frequent	7,999 (70%)

[1] Median (Q1, Q3); n (%)

Table 1. Descriptive characteristics of cancer survivors pooled across all SHARE waves

The analytical sample consisted of 56,780 cancer survivors aged 50 and older who participated in at least one wave of the SHARE survey between Waves 1 and 9. Table 1 summarizes the pooled characteristics of the study population, while Table 2 presents the same characteristics disaggregated by survey wave.

The median age of participants was 69 years (interquartile range [IQR]: 62 to 76). Women represented a slight majority (54%), while men comprised 46% of the sample. Educational attainment was classified according to ISCED-97 levels and grouped into three categories: low (ISCED 0-2), medium (ISCED 3-4), and high (ISCED 5-6). Approximately 39% had medium education, 37% low, and 23% high.

Participants reported a median of one chronic condition (IQR: 0 to 2), excluding cancer, indicating a moderate comorbidity burden. The majority of respondents (77%) fell under the “other or rare” cancer category, while more common cancer types included breast (7.7%), prostate (5.4%), colorectal (3.0%), gynecological (2.3%), genitourinary (1.9%), lung (1.7%), and gastrointestinal cancers (1.6%).

Regarding marital status, 69% were in a relationship, 26% had previously been in one, and 4.8% reported never having been in a relationship. For functional support, 26% of participants reported receiving help from others in the previous 12 months. Participatory support, defined by frequency of club or social activity engagement, showed that 70% were frequent participants (almost daily or weekly), while 30% were infrequent (monthly or less).

When examined over time, all characteristics differed significantly by wave ($p < 0.001$). Median age increased from 64 years in Wave 1 to 73 years in Wave 9, reflecting cohort aging. Female representation grew modestly (from 53% to 57%), and educational attainment improved over time, with fewer low-educated and more highly educated participants. Reported help received increased slightly in later waves, while participation in social activities remained relatively stable.

Descriptive Statistics by Wave: Cancer Survivors

Characteristic	Overall N = 56,780[1]	1 N = 3,318[1]	2 N = 3,858[1]	4 N = 7,221[1]	5 N = 8,638[1]	6 N = 8,863[1]	7 N = 9,170[1]	8 N = 8,720[1]	9 N = 6,992[1]	p-value[2]
Age	69 (62, 76)	64 (57, 72)	65 (58, 72)	66 (60, 73)	69 (62, 76)	70 (63, 77)	71 (64, 78)	71 (65, 78)	73 (67, 79)	<0.001
Sex										<0.001
Female	30,927 (54%)	1,757 (53%)	2,016 (52%)	3,905 (54%)	4,597 (53%)	4,781 (54%)	5,020 (55%)	4,856 (56%)	3,995 (57%)	
Male	25,853 (46%)	1,561 (47%)	1,842 (48%)	3,316 (46%)	4,041 (47%)	4,082 (46%)	4,150 (45%)	3,864 (44%)	2,997 (43%)	
Education Level (ISCED-97)										<0.001
High	13,202 (23%)	704 (21%)	810 (21%)	1,535 (21%)	2,060 (24%)	2,018 (23%)	2,130 (23%)	2,158 (25%)	1,787 (26%)	
Low	21,092 (37%)	1,589 (48%)	1,729 (46%)	2,830 (40%)	3,207 (37%)	3,339 (38%)	3,284 (36%)	2,906 (33%)	2,208 (32%)	
Medium	22,051 (39%)	984 (30%)	1,257 (33%)	2,777 (39%)	3,290 (38%)	3,440 (39%)	3,718 (41%)	3,615 (42%)	2,970 (43%)	
Number of Comorbidities	1.00 (0.00, 2.00)	1.00 (0.00, 2.00)	1.00 (0.00, 2.00)	1.00 (0.00, 2.00)	1.00 (0.00, 3.00)	1.00 (0.00, 3.00)	1.00 (0.00, 3.00)	1.00 (0.00, 2.00)	2.00 (0.00, 3.00)	<0.001
Cancer Site										<0.001
Breast	4,383 (7.7%)	455 (14%)	329 (8.5%)	703 (9.7%)	833 (9.6%)	693 (7.8%)	138 (1.5%)	615 (7.1%)	617 (8.8%)	
Colorectal	1,698 (3.0%)	158 (4.8%)	131 (3.4%)	283 (3.9%)	334 (3.9%)	271 (3.1%)	56 (0.6%)	256 (2.9%)	209 (3.0%)	
Genitourinary	1,079 (1.9%)	85 (2.6%)	71 (1.8%)	175 (2.4%)	220 (2.5%)	172 (1.9%)	38 (0.4%)	148 (1.7%)	170 (2.4%)	
Gynecological	1,288 (2.3%)	135 (4.1%)	89 (2.3%)	260 (3.6%)	204 (2.4%)	222 (2.5%)	28 (0.3%)	196 (2.2%)	154 (2.2%)	
Lung	950 (1.7%)	65 (2.0%)	45 (1.2%)	129 (1.8%)	149 (1.7%)	164 (1.9%)	29 (0.3%)	157 (1.8%)	212 (3.0%)	
Other GI	884 (1.6%)	51 (1.5%)	47 (1.2%)	140 (1.9%)	170 (2.0%)	156 (1.8%)	41 (0.4%)	130 (1.5%)	149 (2.1%)	
Other or rare	43,452 (77%)	2,177 (66%)	2,993 (78%)	5,103 (71%)	6,161 (71%)	6,668 (75%)	8,710 (95%)	6,693 (77%)	4,947 (71%)	
Prostate	3,046 (5.4%)	192 (5.8%)	153 (4.0%)	428 (5.9%)	567 (6.6%)	517 (5.8%)	130 (1.4%)	525 (6.0%)	534 (7.6%)	
Marital Status										<0.001
In a relationship	39,307 (69%)	2,440 (74%)	2,818 (74%)	5,108 (71%)	6,085 (71%)	6,133 (69%)	6,264 (68%)	5,915 (68%)	4,544 (65%)	
Never in a relationship	2,739 (4.8%)	166 (5.0%)	189 (4.9%)	338 (4.7%)	420 (4.9%)	442 (5.0%)	448 (4.9%)	408 (4.7%)	328 (4.7%)	
Previously in a relationship	14,530 (26%)	696 (21%)	814 (21%)	1,740 (24%)	2,094 (24%)	2,260 (26%)	2,445 (27%)	2,378 (27%)	2,103 (30%)	
Received Help from Others	9,744 (26%)	561 (25%)	566 (23%)	1,149 (24%)	1,303 (24%)	2,222 (27%)	505 (27%)	1,631 (27%)	1,807 (29%)	<0.001
Club Participation Frequency										0.002
Infrequent	3,416 (30%)	0 (NA%)	0 (NA%)	530 (31%)	684 (29%)	633 (29%)	662 (32%)	450 (27%)	457 (32%)	
Frequent	7,999 (70%)	0 (NA%)	0 (NA%)	1,196 (69%)	1,691 (71%)	1,519 (71%)	1,407 (68%)	1,236 (73%)	950 (68%)	

[1] Median (Q1, Q3); n (%)

[2] Kruskal-Wallis rank sum test; Pearson's Chi-squared test

Table 2. Descriptive characteristics of cancer survivors by SHARE wave

Table 3[1] displays mean CASP-12 scores by country and cancer status using the raw (unstandardized) CASP-12 scale, which ranges from 12 (lowest quality of life) to 48 (highest). Results reveal substantial variation across Europe. Countries such as Denmark (40.29), Switzerland (39.76), and the Netherlands (38.83) reported the highest average scores among cancer survivors, while countries including Greece (29.67), Italy (32.27), and Hungary (33.11) reported the lowest. Figure 1 illustrates this distribution in the form of country-level boxplots of raw CASP-12 scores, capturing both central tendencies and the spread of responses. These findings point to meaningful cross-country differences in

[1] Can be found in the list of appendices, as well as table 4 which reviews standardized CASP-12 scores by country, wave, and cancer status

subjective quality of life among cancer survivors, even before accounting for other covariates.

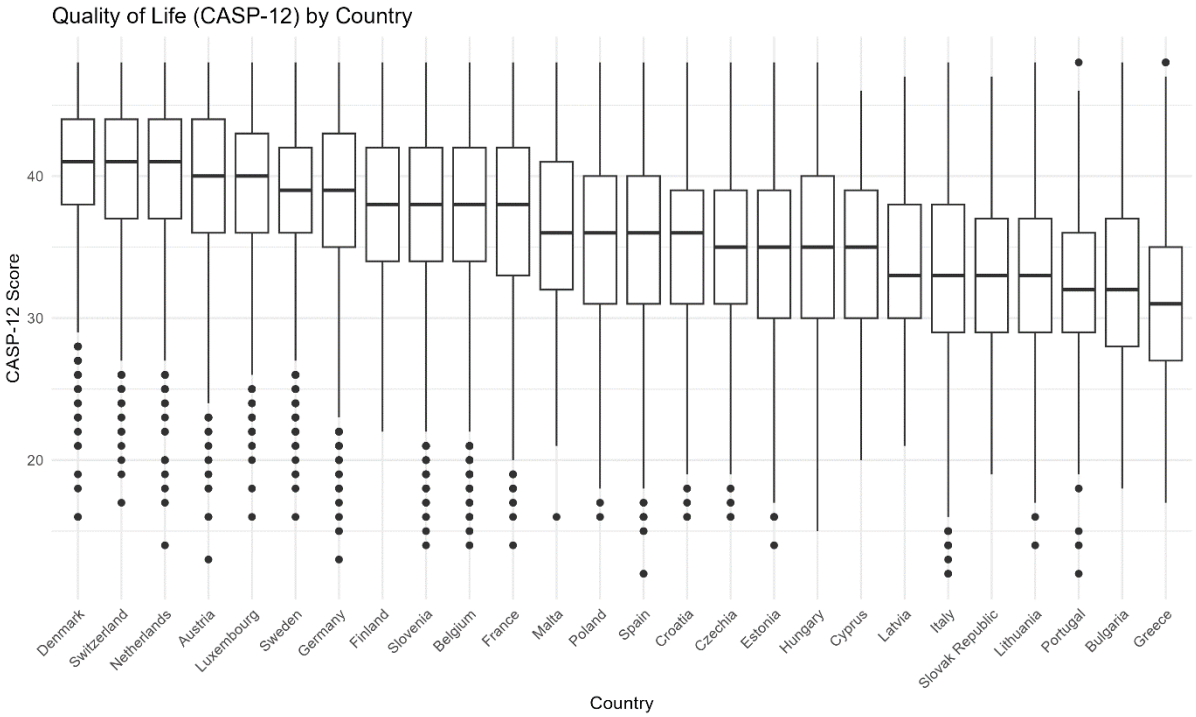

Figure 1. Distribution of CASP-12 scores across SHARE countries

Changes in Quality of Life Over Time

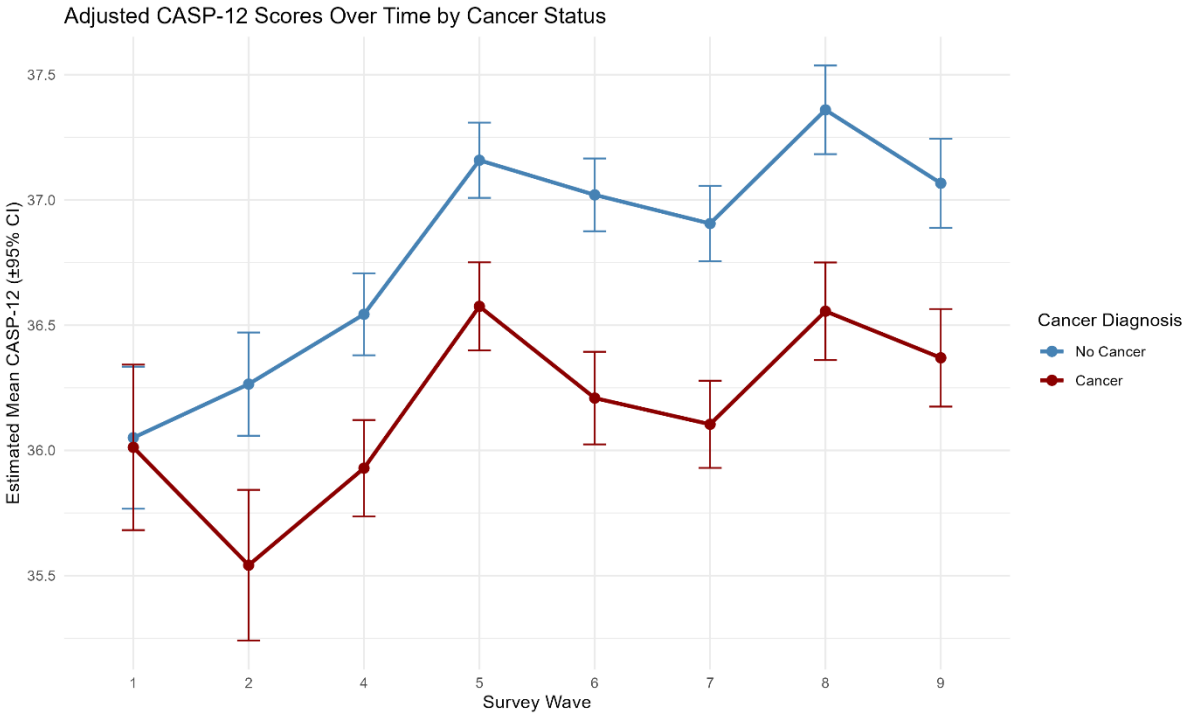

Figure 2. Adjusted CASP-12 scores over time by cancer status

Figure 2 presents mean CASP-12 scores over time by cancer status, using the raw CASP-12 scale. Across all waves, cancer survivors reported lower average scores compared to individuals without cancer. While both groups showed some improvement across waves, the gap between them persisted. For example, in Wave 1, both groups averaged around 36, but by Wave 8, survivors reported a mean score of 36.7, compared to 37.4 among non-cancer respondents. Although numerically modest, the stability of this gap over time is noteworthy.

To account for inter-country differences in response patterns, Figures 3 and 4 present results using standardized CASP-12 scores (CASP-z). These z-scores were computed within each country and wave, so a value of 0 corresponds to the country average at that wave, while positive or negative values indicate better or worse relative quality of life, respectively.

Figure 3 displays standardized CASP-z scores by country, stratified by cancer status. In nearly all countries, cancer survivors scored below the national average. The most pronounced differences were observed in Hungary, Greece, and Italy, where survivors scored between -0.5 and -1.0 standard deviations below their peers. In contrast, survivors in Denmark, Switzerland, and the Netherlands reported scores close to or above their national means, suggesting more equitable survivorship outcomes.

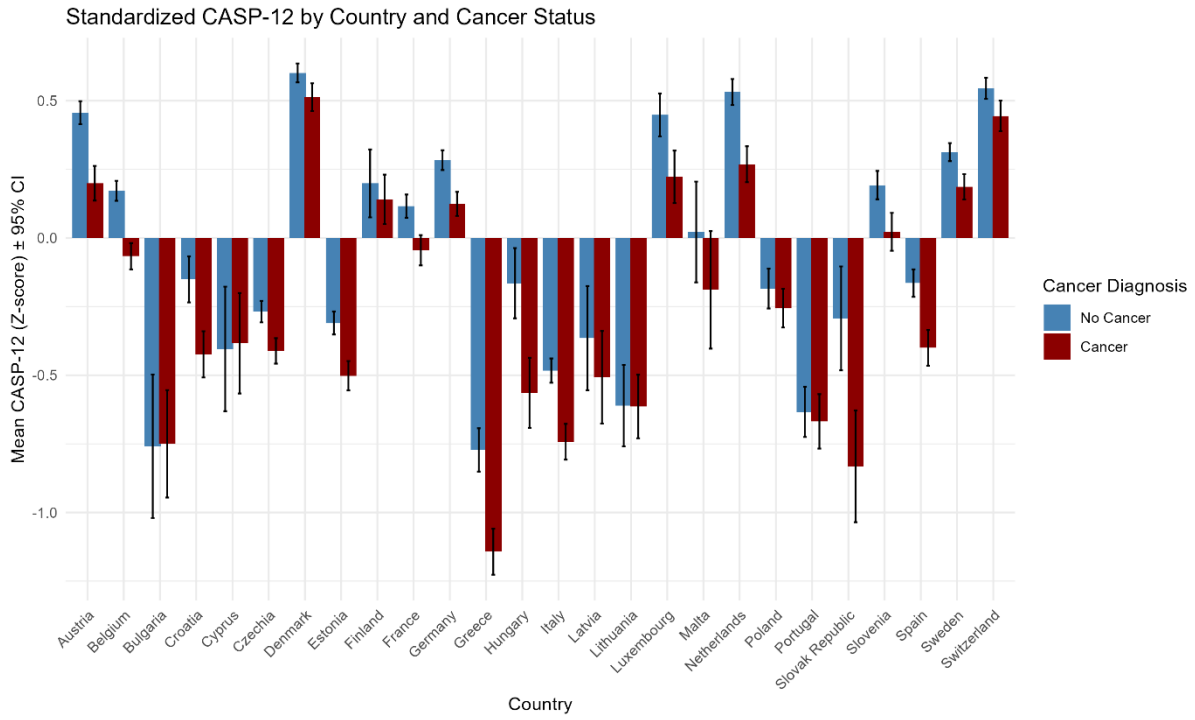

Figure 3. Standardized CASP-12 by country and cancer status

Figure 4 shows longitudinal CASP-z trends by country and wave, further illustrating how these disparities persist over time. In countries such as Portugal, Greece, and Lithuania, cancer survivors consistently scored below national averages across waves. In contrast,

countries like Finland and the Netherlands showed more stable and balanced trends, with smaller deviations between cancer and non-cancer groups. These results highlight how national context not only influences baseline well-being but also shapes the long-term quality of life of cancer survivors.

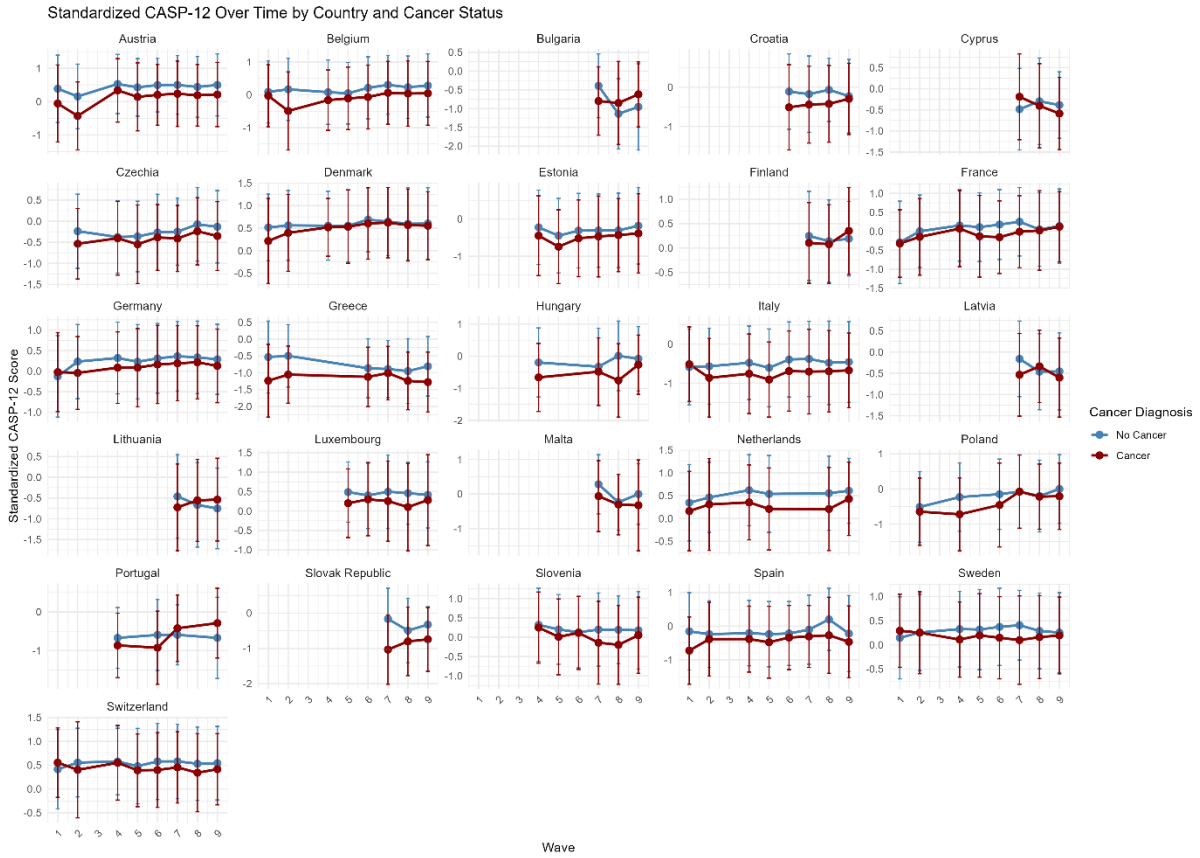

Figure 4. Standardized CASP-12 over time by country and cancer status

Association Between Functional Social Support and Quality of Life

To explore the relationship between functional support and quality of life among older cancer survivors, eight statistical models were estimated using the wave-standardized CASP-12 score (CASP-z) as the outcome. Functional support was defined as having received help from others in the past year. Across all model specifications, this form of support was consistently and significantly associated with lower CASP-z scores.

In the unadjusted model (Model 1), receiving help was linked to a 0.335 standard deviation decrease in CASP-z (95% CI: -0.360 to -0.311; $p < 0.001$). This negative association persisted after adjusting for demographic and health characteristics in Model 2, although the effect size was reduced to -0.210 (95% CI: -0.233 to -0.186; $p < 0.001$). Among the covariates, older age and greater comorbidity burden were associated with poorer quality of

life, whereas being female and having higher educational attainment were positively associated with CASP-z scores.

Models 3 and 4 introduced fixed effects for country and survey wave, respectively, to account for unobserved heterogeneity across national contexts and time periods. These adjustments yielded very similar estimates, with coefficients of -0.246 (95% CI: -0.269 to -0.223) for Model 3 and -0.210 (95% CI: -0.233 to -0.186) for Model 4, both statistically significant at $p < 0.001$.

To account for repeated observations within individuals, mixed-effects models were also estimated (Models 5–8). In the baseline mixed model (Model 5), which included only random intercepts for individuals, the association between receiving help and CASP-z remained strong ($\beta = -0.198$, 95% CI: -0.217 to -0.179; $p < 0.001$). The effect persisted in Model 6 after adjusting for sociodemographic and health factors ($\beta = -0.155$, 95% CI: -0.174 to -0.137). Including country fixed effects in Model 7 yielded a slightly stronger association ($\beta = -0.169$, 95% CI: -0.188 to -0.151), while adding wave fixed effects in Model 8 produced a nearly identical estimate ($\beta = -0.158$, 95% CI: -0.177 to -0.140). All associations remained highly significant.

Overall, these findings suggest that cancer survivors who report receiving help from others tend to experience lower quality of life. Although this may appear counterintuitive at first, it likely reflects that receiving help is not a direct source of distress but rather a proxy for underlying vulnerability, such as physical limitations or social dependency, both of which are known to be associated with reduced well-being.

Model diagnostics reinforced the robustness of these findings. Variance inflation factors (VIFs) were below 2, indicating no concerning multicollinearity. Residuals were approximately normally distributed and homoscedastic. All mixed-effects models converged properly with no singularity issues, and intraclass correlation coefficients (ICCs) confirmed substantial within-person variation across waves, supporting the use of random intercepts in the longitudinal analysis.

Association Between Participatory Social Support and Quality of Life

The effect of participatory social support, operationalized as frequency of engagement in club or social activities, was examined using the full eight-model analytical structure. The binary indicator contrasted frequent versus infrequent participation, with CASP-z (the standardized CASP-12 index) as the outcome variable.

Across all models, frequent participation was significantly associated with higher CASP-z scores, indicating better reported quality of life. In the unadjusted linear regression (Model

1), frequent engagement was associated with a +0.174 standard deviation (SD) increase in CASP-z (95% CI: 0.142 to 0.205; $p < 0.001$). When adjusting for sociodemographic and health characteristics in Model 2, the association remained strong at +0.138 SD (95% CI: 0.107 to 0.170; $p < 0.001$). Age and comorbidity count were negatively associated with CASP-z, while higher education levels were positively associated. Sex and marital status had less consistent effects.

Model 3 added country fixed effects, slightly attenuating the association to +0.110 SD (95% CI: 0.080 to 0.140; $p < 0.001$), while Model 4 included wave fixed effects and showed a similar estimate of +0.139 SD (95% CI: 0.108 to 0.170; $p < 0.001$), reinforcing the robustness of the association across time and countries.

Mixed-effects models incorporating random intercepts for individuals yielded consistent results. In the base random intercept model (Model 5), frequent participation was associated with a +0.106 SD increase in CASP-z (95% CI: 0.077 to 0.134; $p < 0.001$). After adjusting for all covariates (Model 6), the association remained statistically significant at +0.096 SD (95% CI: 0.068 to 0.123; $p < 0.001$). The inclusion of country-level fixed effects in Model 7 produced a slightly lower estimate of +0.083 SD (95% CI: 0.055 to 0.111; $p < 0.001$), while Model 8, which included wave fixed effects, yielded a coefficient of +0.098 SD (95% CI: 0.069 to 0.127; $p < 0.001$).

Taken together, these results suggest that frequent social participation contributes positively to the subjective quality of life of older adults with a history of cancer. Unlike functional support, which may signal dependency or frailty, participatory support may reflect active engagement and autonomy, reinforcing psychosocial well-being and resilience.

Model diagnostics supported the robustness of the findings. No multicollinearity was observed among predictors (VIFs < 2), and the residuals conformed to assumptions of normality and homoscedasticity. All mixed-effects models converged successfully without singularity issues. The intraclass correlation coefficients (ICCs) confirmed meaningful within-person variation across waves, justifying the use of random intercepts at the individual level in the longitudinal framework.

Panel A. OLS Models Predicting Standardized CASP-12 (CASP-z)								
	Functional support				Participatory support			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Beta coefficient	-0.335	-0.210	-0.246	-0.210	0.174	0.138	0.110	0.139
95% CI	[-0.360, -0.311]	[-0.233, -0.186]	[-0.269, -0.223]	[-0.233, -0.186]	[0.142, 0.205]	[0.107, 0.170]	[0.080, 0.140]	[0.108, 0.170]
p-value	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
R-squared	0.046	0.231	0.263	0.247	0.030	0.221	0.256	0.247
Cancer site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sex	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Age	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Educational level	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Comorbidity count	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Marital status	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Country	No	No	Yes	Yes	No	No	Yes	Yes
Wave	No	No	No	Yes	No	No	No	Yes

Table 5. OLS regression results for functional and participatory support predicting CASP-z

Panel B. Mixed-Effects Models Predicting Standardized CASP-12 (CASP-z)								
	Functional support				Participatory support			
	Model 5	Model 6	Model 7	Model 8	Model 5	Model 6	Model 7	Model 8
Beta coefficient	-0.198	-0.155	-0.169	-0.158	0.106	0.096	0.083	0.098
95% CI	[-0.217, -0.179]	[-0.174, -0.137]	[-0.188, -0.151]	[-0.177, -0.140]	[0.077, 0.134]	[0.068, 0.123]	[0.055, 0.111]	[0.069, 0.127]
p-value	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
R-squared	0.083	0.248	0.281	0.269	0.077	0.248	0.275	0.263
Cancer site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sex	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Age	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Educational level	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Comorbidity count	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Marital status	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Country	No	No	Yes	Yes	No	No	Yes	Yes
Wave	No	No	No	Yes	No	No	No	Yes

Table 6. Mixed-effects regression results for functional and participatory support predicting CASP-z

Discussion

This study used longitudinal data from the Survey of Health, Ageing and Retirement in Europe (SHARE) to explore how different types of social support relate to quality of life among older adults who have survived cancer. One of the most significant findings is that receiving functional support, meaning help from others, was consistently associated to lower quality of life, as measured by the CASP-12 scale. This held true across all the models, even after accounting for factors like age, sex, education, health status, country differences, and

changes over time. At first glance, this is surprising, since most previous research suggests that social support generally leads to better psychological well-being and helps people cope with illness (4, 6). However, a growing body of research recognizes that the relationship between social support and quality of life among older adults is not straightforward, but rather depends on the type of support, the context, and the underlying health of the individual (1, 13). In particular, the negative association observed between receiving functional support and quality of life is best understood through the lens of reverse causality: individuals who experience declines in quality of life, due to frailty, functional limitations, or advanced disease, are more likely to require and receive help from others, rather than the support itself causing lower well-being. This pattern is well-documented in SHARE-based studies, where receiving help is consistently associated with poorer quality of life, reflecting underlying health needs rather than a direct negative effect of support (3, 15). Longitudinal analyses and reviews further emphasize that functional support is more likely to serve as a marker of vulnerability, such as physical limitations or social dependency, than as a source of distress (1, 13). In the present study, older age, higher comorbidity, and poorer functional status were also associated with lower quality of life, reinforcing the idea that the negative link between functional support and well-being is primarily driven by underlying health challenges rather than by the support itself (3, 15, 25). Thus, the need for help signals underlying vulnerability, and interventions aimed at improving quality of life should address the root causes of functional dependency, rather than interpreting functional support as a source of distress.

The picture becomes more nuanced when we look at participatory support, meaning regular involvement in social or group activities. Unlike functional support, frequent participation in these activities was consistently associated with higher quality of life, regardless of the model used. This fits with previous research showing that staying socially active and engaged is protective for mental health and well-being in older adults (4, 15, 25). Participating in clubs or community groups seems to foster a sense of belonging, purpose, and self-efficacy, all of which are important for psychological well-being and can help buffer against the negative effects of illness and aging (15, 25). Importantly, this positive effect was seen across countries with different economic backgrounds, echoing findings from recent large-scale studies of European cancer survivors (26, 27).

Recent reviews and empirical studies help clarify these differences. For example, Kadambi et al. (2020) (25) point out that functional support is often given in response to health needs and may signal vulnerability, while participatory support reflects active social integration and personal agency. This distinction is crucial for understanding how social support influences quality of life. The buffering hypothesis, which suggests that social support helps people

cope with stress, may apply more to participatory support, while functional support may be more closely linked to health deficits (4, 25). Moreover, the quality and source of support, whether it comes from family, friends, or health professionals, can also influence these associations, as shown in recent multidimensional analyses (25, 26).

Differences between countries were also a notable theme in this study. The analysis revealed significant variation in quality of life depending on national economic status, with survivors in lower-GDP countries reporting lower well-being than those in wealthier nations. This aligns with recent large-scale studies using SHARE data, which consistently show that cancer survivors in lower-income European countries face compounded challenges due to both cancer-related and socioeconomic factors (13, 26, 27). For example, Baziliansky et al. (2023) (26) found that cancer survivors in low-GDP countries were more likely to experience higher depression and lower quality of life, even after adjusting for individual-level factors like age, education, and comorbidity. These disparities are likely rooted in differences in healthcare access, social safety nets, and survivorship care policies, which can limit the availability and effectiveness of psychosocial interventions in resource-limited settings (13, 26).

Longitudinal studies further highlight the lasting impact of cancer on survivors' well-being. Recent research using SHARE data has identified distinct trajectories of depression and quality of life among cancer survivors and people without cancer, with a greater proportion of survivors following high-depression and low-quality-of-life paths over time (27). While the overall patterns were similar between groups, the risk of persistent psychological distress and lower quality of life was significantly higher among cancer survivors, especially those with functional limitations and fewer socioeconomic resources (27). These findings underscore the importance of considering both individual and contextual factors when designing support interventions for cancer survivors.

Several methodological issues and potential biases should be kept in mind when interpreting these results. First, the use of self-reported measures for social support and quality of life raises the possibility of measurement error and recall bias. The CASP-12 scale, while validated for use in older European populations, has some psychometric limitations, such as ceiling effects and cultural differences in how people interpret its items (10, 11, 22). These issues may make it harder to compare results across countries and subgroups. Second, the observational nature of the data means that we cannot draw firm conclusions about cause and effect. Although the analysis used longitudinal modeling and adjusted for a range of covariates, there may still be unmeasured factors, such as disease severity, treatment side effects, or psychosocial stressors, that influence the results. Third, the way social support

was measured in the SHARE survey limited our ability to include all dimensions. For example, structural support, related to network size and contact frequency, was excluded from the final models due to overlap with participatory support, which may have hidden its unique contribution to quality of life.

Another important consideration is selection bias. The analysis was limited to people who participated in at least two waves and had complete data for key variables, which may have excluded the most vulnerable or isolated survivors. In addition, the exclusion of countries with incomplete data and the focus on European populations mean that the findings may not generalize to other regions or healthcare systems.

Conclusion/recommendations/implications

The findings of this study paint a nuanced picture of how social support shapes quality of life for older adults living with cancer across Europe. The consistently negative association between functional support, meaning the need to receive help from others, and quality of life, as measured by the CASP-12 scale, suggests that needing assistance is often a sign of underlying health challenges rather than a source of well-being in itself. This is in line with what other researchers have found: older cancer survivors who require help are usually those facing more health problems, physical limitations, or advanced illness, all of which can make life more difficult and reduce overall well-being (3, 21, 25). On the other hand, being actively involved in social or community activities is strongly tied to better quality of life. This highlights how important it is for older adults to stay connected, engaged, and part of a community, not just for practical reasons, but for their sense of purpose, autonomy, and enjoyment (4, 15). These patterns are confirmed in recent large studies from across Europe, which show that cancer's negative effects on quality of life and emotional well-being are especially pronounced in countries with lower incomes, where healthcare access and social support systems are often weaker, making it harder for survivors to cope (26, 27).

These results have several important implications for how we care for older cancer survivors. In clinical practice, it's crucial to recognize that not all kinds of social support are created equal. While some people will always need practical help due to illness or disability, this kind of support should not be mistaken for something that automatically improves well-being. Instead, programs and interventions should focus on helping people stay socially active, joining clubs, participating in group activities, or connecting with peers who understand what they're going through. These kinds of activities help people feel valued, independent, and connected, which are all key ingredients for a good quality of life (4, 25). Routine checks for depression or low quality of life are especially important in places where resources are limited, so that people who are struggling can get the support they need sooner rather than

later (27). The persistent gaps in well-being between richer and poorer countries also highlight the need for interventions that address both personal and societal factors, things like better access to rehabilitation services, help with medical costs, and making sure psychosocial support is built into national cancer care plans (12, 27).

From a policy perspective, these findings call for a stronger focus on reducing inequality in survivorship care across Europe. Policymakers should consider setting up specialized centres that offer long-term support to older cancer survivors, with a special emphasis on those in lower-income countries. These centres could bring together professionals from different fields, doctors, nurses, social workers, and psychologists, who understand the unique needs of older adults with cancer. Recent OECD and European Commission country cancer profiles highlight persistent disparities in cancer outcomes and survivorship care between higher- and lower-income EU countries. For example, in countries such as Hungary, Croatia, Romania, Latvia, and Bulgaria, cancer spending per capita is among the lowest in the EU (below €150 per capita), and mortality rates remain higher compared to countries like Germany or Switzerland, where spending exceeds €400 per capita (31, 32, 33). Additionally, the profiles show that socio-economic inequalities in cancer mortality are particularly pronounced among men and those with lower education levels, with mortality rates for lower-educated men in countries such as Czechia, Estonia, France, Hungary, Lithuania, and Poland being up to twice as high as those for higher-educated men (31, 33, 34). Addressing these inequalities requires targeted investment in survivorship infrastructure and multidisciplinary care (31).

Policymakers should also make sure there are resources to support caregivers, since caring for someone with cancer can be emotionally and physically exhausting, and this burden can affect both the caregiver and the survivor (25). Identifying people who are at risk early and connecting them with community resources can help ease these burdens and lead to better outcomes for everyone involved.

Looking ahead, there is still much to learn about how social support, caregiver stress, and other psychological factors interact to shape the lives of older cancer survivors. Future research should keep exploring these relationships, including how the quality of support and the role of other resources like resilience and optimism play out over time (23, 25). More long-term and cross-cultural studies will help us track changes in depression and quality of life and identify factors that can be changed to make life better for survivors. By putting these insights into practice, healthcare providers and policymakers can help reduce the “quality of life gap” for older cancer survivors and make sure that everyone, no matter where they live or what their circumstances are, has a fair shot at a good life after cancer.

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List of Appendices

Mean CASP-12 Score by Country and Cancer Status				
Country	Cancer status	Mean CASP	SD CASP	N
Austria	No Cancer	39.87	5.64	1739
Austria	Cancer	38.20	6.24	933
Belgium	No Cancer	38.06	5.99	2605
Belgium	Cancer	36.52	6.20	1612
Bulgaria	No Cancer	31.96	6.19	56
Bulgaria	Cancer	32.03	6.02	91
Croatia	No Cancer	35.83	5.89	469
Croatia	Cancer	34.10	6.33	536
Cyprus	No Cancer	34.17	5.91	64
Cyprus	Cancer	34.34	6.08	107
Czechia	No Cancer	35.23	5.48	1858
Czechia	Cancer	34.33	5.36	1276
Denmark	No Cancer	40.78	4.86	1902
Denmark	Cancer	40.29	5.10	983
Estonia	No Cancer	34.97	6.38	2205
Estonia	Cancer	33.71	6.66	1480
Finland	No Cancer	38.01	5.23	172
Finland	Cancer	37.64	5.29	328
France	No Cancer	37.72	5.97	1918
France	Cancer	36.69	6.34	1260
Germany	No Cancer	38.75	5.55	2266
Germany	Cancer	37.82	5.84	1714
Greece	No Cancer	32.06	5.89	537
Greece	Cancer	29.67	5.52	421
Hungary	No Cancer	35.69	7.01	282
Hungary	Cancer	33.11	6.74	263
Italy	No Cancer	33.90	6.22	1901
Italy	Cancer	32.27	6.40	925
Latvia	No Cancer	34.52	5.63	86
Latvia	Cancer	33.57	5.86	115
Lithuania	No Cancer	32.91	6.31	175
Lithuania	Cancer	32.89	6.44	295
Luxembourg	No Cancer	39.74	5.42	457
Luxembourg	Cancer	38.45	6.32	420
Malta	No Cancer	36.93	5.39	85
Malta	Cancer	35.53	6.64	93
Netherlands	No Cancer	40.46	5.00	1076
Netherlands	Cancer	38.83	5.52	703
Poland	No Cancer	35.63	6.45	754
Poland	Cancer	35.18	6.40	790
Portugal	No Cancer	32.67	5.54	345
Portugal	Cancer	32.42	5.86	330
Slovak Republic	No Cancer	34.87	5.27	75
Slovak Republic	Cancer	31.57	5.96	82
Slovenia	No Cancer	38.11	5.95	1267
Slovenia	Cancer	37.05	6.33	799
Spain	No Cancer	35.93	6.34	1523
Spain	Cancer	34.49	6.43	940
Sweden	No Cancer	38.94	5.02	2228
Sweden	Cancer	38.25	5.34	1288
Switzerland	No Cancer	40.43	4.86	1525
Switzerland	Cancer	39.76	5.00	776

Table 3. Mean CASP-12 scores by country and cancer status

Standardized CASP-12 by Country, Wave, and Cancer Status					
Country	Wave	Cancer status	Mean CASP-z	SD CASP-z	N
Austria	1	No Cancer	0.39	1.01	95
Austria	1	Cancer	-0.06	1.16	56
Austria	2	No Cancer	0.16	0.97	109
Austria	2	Cancer	-0.43	1.02	29
Austria	4	No Cancer	0.53	0.89	283
Austria	4	Cancer	0.34	0.95	256
Austria	5	No Cancer	0.43	0.87	361
Austria	5	Cancer	0.14	1.02	149
Austria	6	No Cancer	0.50	0.81	292
Austria	6	Cancer	0.20	0.91	119
Austria	7	No Cancer	0.50	0.88	268
Austria	7	Cancer	0.23	0.98	133
Austria	8	No Cancer	0.44	0.91	151
Austria	8	Cancer	0.19	0.93	72
Austria	9	No Cancer	0.50	0.93	180
Austria	9	Cancer	0.21	0.96	119
Belgium	1	No Cancer	0.09	0.95	162
Belgium	1	Cancer	-0.03	0.95	142
Belgium	2	No Cancer	0.17	0.95	278
Belgium	2	Cancer	-0.49	1.19	97
Belgium	4	No Cancer	0.08	0.98	381
Belgium	4	Cancer	-0.16	0.92	273
Belgium	5	No Cancer	0.05	0.94	490
Belgium	5	Cancer	-0.11	0.95	235
Belgium	6	No Cancer	0.21	0.95	488
Belgium	6	Cancer	-0.07	0.97	259
Belgium	7	No Cancer	0.30	0.90	388
Belgium	7	Cancer	0.06	0.96	250
Belgium	8	No Cancer	0.23	0.95	163
Belgium	8	Cancer	0.04	1.00	129
Belgium	9	No Cancer	0.28	0.96	255
Belgium	9	Cancer	0.05	0.97	227

Table 4. Standardized CASP-12 scores by country, wave, and cancer status (1)

Bulgaria	7	No Cancer	-0.39	0.85	25
Bulgaria	7	Cancer	-0.80	0.91	32
Bulgaria	8	No Cancer	-1.14	0.94	17
Bulgaria	8	Cancer	-0.85	1.11	27
Bulgaria	9	No Cancer	-0.95	1.15	14
Bulgaria	9	Cancer	-0.62	0.87	32
Croatia	6	No Cancer	-0.11	0.96	108
Croatia	6	Cancer	-0.51	1.09	154
Croatia	7	No Cancer	-0.18	0.97	136
Croatia	7	Cancer	-0.44	0.98	138
Croatia	8	No Cancer	-0.07	0.81	103
Croatia	8	Cancer	-0.42	0.98	117
Croatia	9	No Cancer	-0.23	0.94	122
Croatia	9	Cancer	-0.30	0.91	127
Cyprus	7	No Cancer	-0.48	0.97	28
Cyprus	7	Cancer	-0.19	1.02	42
Cyprus	8	No Cancer	-0.30	1.03	18
Cyprus	8	Cancer	-0.40	1.00	28
Cyprus	9	No Cancer	-0.39	0.79	18
Cyprus	9	Cancer	-0.59	0.86	37
Czechia	2	No Cancer	-0.24	0.88	115
Czechia	2	Cancer	-0.54	0.84	62
Czechia	4	No Cancer	-0.37	0.86	341
Czechia	4	Cancer	-0.40	0.87	256
Czechia	5	No Cancer	-0.36	0.84	362
Czechia	5	Cancer	-0.55	0.93	256
Czechia	6	No Cancer	-0.27	0.91	382
Czechia	6	Cancer	-0.39	0.78	205
Czechia	7	No Cancer	-0.25	0.79	303
Czechia	7	Cancer	-0.41	0.78	195
Czechia	8	No Cancer	-0.07	0.87	192
Czechia	8	Cancer	-0.24	0.80	151
Czechia	9	No Cancer	-0.13	0.86	163
Czechia	9	Cancer	-0.35	0.82	151

Table 4. Standardized CASP-12 scores by country, wave, and cancer status (2)

Denmark	1	No Cancer	0.51	0.74	97
Denmark	1	Cancer	0.22	0.94	82
Denmark	2	No Cancer	0.56	0.77	199
Denmark	2	Cancer	0.40	0.85	144
Denmark	4	No Cancer	0.55	0.76	234
Denmark	4	Cancer	0.52	0.64	62
Denmark	5	No Cancer	0.55	0.81	317
Denmark	5	Cancer	0.53	0.81	222
Denmark	6	No Cancer	0.69	0.71	358
Denmark	6	Cancer	0.60	0.79	141
Denmark	7	No Cancer	0.64	0.75	296
Denmark	7	Cancer	0.62	0.78	135
Denmark	8	No Cancer	0.60	0.80	221
Denmark	8	Cancer	0.57	0.80	104
Denmark	9	No Cancer	0.60	0.79	180
Denmark	9	Cancer	0.55	0.75	93
Estonia	4	No Cancer	-0.22	1.00	420
Estonia	4	Cancer	-0.45	1.07	386
Estonia	5	No Cancer	-0.45	1.00	482
Estonia	5	Cancer	-0.74	0.99	247
Estonia	6	No Cancer	-0.31	1.00	438
Estonia	6	Cancer	-0.52	1.03	240
Estonia	7	No Cancer	-0.31	0.99	375
Estonia	7	Cancer	-0.47	1.09	228
Estonia	8	No Cancer	-0.31	1.00	240
Estonia	8	Cancer	-0.43	0.98	169
Estonia	9	No Cancer	-0.18	1.03	250
Estonia	9	Cancer	-0.39	1.07	210
Finland	7	No Cancer	0.25	0.91	56
Finland	7	Cancer	0.11	0.83	150
Finland	8	No Cancer	0.14	0.84	39
Finland	8	Cancer	0.08	0.81	119
Finland	9	No Cancer	0.19	0.76	77
Finland	9	Cancer	0.35	0.89	59

Table 4. Standardized CASP-12 scores by country, wave, and cancer status (3)

France	1	No Cancer	-0.29	1.09	69
France	1	Cancer	-0.32	0.89	66
France	2	No Cancer	0.00	0.96	209
France	2	Cancer	-0.15	1.01	93
France	4	No Cancer	0.15	0.94	324
France	4	Cancer	0.07	1.00	280
France	5	No Cancer	0.11	0.90	378
France	5	Cancer	-0.13	1.08	221
France	6	No Cancer	0.18	0.92	317
France	6	Cancer	-0.16	0.96	171
France	7	No Cancer	0.25	0.90	251
France	7	Cancer	-0.01	0.95	155
France	8	No Cancer	0.05	0.97	193
France	8	Cancer	0.02	1.05	149
France	9	No Cancer	0.14	0.98	177
France	9	Cancer	0.12	0.93	125
Germany	1	No Cancer	-0.13	0.99	86
Germany	1	Cancer	-0.02	0.96	110
Germany	2	No Cancer	0.23	0.90	203
Germany	2	Cancer	-0.04	0.89	82
Germany	4	No Cancer	0.32	0.87	163
Germany	4	Cancer	0.09	0.87	99
Germany	5	No Cancer	0.23	0.90	365
Germany	5	Cancer	0.08	0.95	436
Germany	6	No Cancer	0.31	0.85	481
Germany	6	Cancer	0.16	0.95	253
Germany	7	No Cancer	0.36	0.85	388
Germany	7	Cancer	0.19	0.91	265
Germany	8	No Cancer	0.34	0.88	289
Germany	8	Cancer	0.21	0.89	253
Germany	9	No Cancer	0.29	0.85	291
Germany	9	Cancer	0.13	0.90	216
Greece	1	No Cancer	-0.53	1.07	59
Greece	1	Cancer	-1.24	1.08	38

Table 4. Standardized CASP-12 scores by country, wave, and cancer status (4)

Greece	2	No Cancer	-0.50	0.93	96
Greece	2	Cancer	-1.05	0.85	52
Greece	6	No Cancer	-0.87	0.88	115
Greece	6	Cancer	-1.12	0.88	118
Greece	7	No Cancer	-0.89	0.85	79
Greece	7	Cancer	-1.01	0.79	85
Greece	8	No Cancer	-0.95	0.96	96
Greece	8	Cancer	-1.24	0.85	73
Greece	9	No Cancer	-0.81	0.88	92
Greece	9	Cancer	-1.28	0.89	55
Hungary	4	No Cancer	-0.19	1.08	93
Hungary	4	Cancer	-0.66	1.06	111
Hungary	7	No Cancer	-0.33	1.20	73
Hungary	7	Cancer	-0.48	1.05	73
Hungary	8	No Cancer	0.01	1.08	52
Hungary	8	Cancer	-0.75	1.14	39
Hungary	9	No Cancer	-0.08	1.00	64
Hungary	9	Cancer	-0.26	0.92	40
Italy	1	No Cancer	-0.59	0.97	103
Italy	1	Cancer	-0.51	0.95	60
Italy	2	No Cancer	-0.57	0.97	234
Italy	2	Cancer	-0.86	1.01	76
Italy	4	No Cancer	-0.48	0.94	242
Italy	4	Cancer	-0.76	1.02	104
Italy	5	No Cancer	-0.61	1.00	311
Italy	5	Cancer	-0.91	0.96	175
Italy	6	No Cancer	-0.39	0.96	330
Italy	6	Cancer	-0.69	1.03	168
Italy	7	No Cancer	-0.38	0.96	312
Italy	7	Cancer	-0.70	1.08	149
Italy	8	No Cancer	-0.48	1.07	155
Italy	8	Cancer	-0.70	1.04	68
Italy	9	No Cancer	-0.46	1.03	214
Italy	9	Cancer	-0.67	0.95	125

Table 4. Standardized CASP-12 scores by country, wave, and cancer status (5)

Latvia	7	No Cancer	-0.16	0.89	27
Latvia	7	Cancer	-0.53	0.97	39
Latvia	8	No Cancer	-0.46	0.90	33
Latvia	8	Cancer	-0.34	0.85	31
Latvia	9	No Cancer	-0.45	0.91	26
Latvia	9	Cancer	-0.60	0.93	45
Lithuania	7	No Cancer	-0.46	1.01	69
Lithuania	7	Cancer	-0.72	1.05	110
Lithuania	8	No Cancer	-0.67	1.02	53
Lithuania	8	Cancer	-0.56	0.99	100
Lithuania	9	No Cancer	-0.75	0.97	53
Lithuania	9	Cancer	-0.54	1.00	85
Luxembourg	5	No Cancer	0.49	0.77	72
Luxembourg	5	Cancer	0.20	0.88	128
Luxembourg	6	No Cancer	0.40	0.85	129
Luxembourg	6	Cancer	0.30	0.93	89
Luxembourg	7	No Cancer	0.50	0.94	110
Luxembourg	7	Cancer	0.25	1.03	77
Luxembourg	8	No Cancer	0.46	0.80	69
Luxembourg	8	Cancer	0.10	1.12	78
Luxembourg	9	No Cancer	0.42	0.85	77
Luxembourg	9	Cancer	0.28	1.17	48
Malta	7	No Cancer	0.28	0.85	28
Malta	7	Cancer	-0.06	1.02	46
Malta	8	No Cancer	-0.24	0.81	25
Malta	8	Cancer	-0.30	0.87	26
Malta	9	No Cancer	0.00	0.87	32
Malta	9	Cancer	-0.33	1.31	21
Netherlands	1	No Cancer	0.34	0.84	110
Netherlands	1	Cancer	0.16	0.87	119
Netherlands	2	No Cancer	0.46	0.77	204
Netherlands	2	Cancer	0.31	1.01	80
Netherlands	4	No Cancer	0.62	0.78	210
Netherlands	4	Cancer	0.35	0.82	119

Table 4. Standardized CASP-12 scores by country, wave, and cancer status (6)

Netherlands	5	No Cancer	0.54	0.84	249
Netherlands	5	Cancer	0.21	0.90	179
Netherlands	8	No Cancer	0.55	0.81	150
Netherlands	8	Cancer	0.21	0.91	104
Netherlands	9	No Cancer	0.61	0.71	153
Netherlands	9	Cancer	0.43	0.80	102
Poland	2	No Cancer	-0.51	1.01	122
Poland	2	Cancer	-0.65	0.96	52
Poland	4	No Cancer	-0.23	0.97	112
Poland	4	Cancer	-0.72	1.04	51
Poland	6	No Cancer	-0.15	1.00	97
Poland	6	Cancer	-0.46	1.20	60
Poland	7	No Cancer	-0.08	1.05	191
Poland	7	Cancer	-0.08	1.04	219
Poland	8	No Cancer	-0.20	1.02	104
Poland	8	Cancer	-0.22	0.93	183
Poland	9	No Cancer	0.00	0.98	128
Poland	9	Cancer	-0.21	0.95	225
Portugal	4	No Cancer	-0.67	0.79	121
Portugal	4	Cancer	-0.87	0.83	96
Portugal	6	No Cancer	-0.59	0.92	103
Portugal	6	Cancer	-0.93	0.95	91
Portugal	7	No Cancer	-0.59	0.78	67
Portugal	7	Cancer	-0.42	0.86	87
Portugal	9	No Cancer	-0.67	1.05	54
Portugal	9	Cancer	-0.29	0.90	56
Slovak Republic	7	No Cancer	-0.16	0.87	39
Slovak Republic	7	Cancer	-1.03	0.98	20
Slovak Republic	8	No Cancer	-0.49	0.91	23
Slovak Republic	8	Cancer	-0.80	0.97	26
Slovak Republic	9	No Cancer	-0.32	0.50	13
Slovak Republic	9	Cancer	-0.74	0.90	36
Slovenia	4	No Cancer	0.32	0.95	130
Slovenia	4	Cancer	0.25	0.92	136

Table 4. Standardized CASP-12 scores by country, wave, and cancer status (7)

Slovenia	5	No Cancer	0.20	0.90	189
Slovenia	5	Cancer	0.01	0.98	115
Slovenia	6	No Cancer	0.13	0.92	251
Slovenia	6	Cancer	0.11	0.95	193
Slovenia	7	No Cancer	0.20	0.95	281
Slovenia	7	Cancer	-0.14	1.07	142
Slovenia	8	No Cancer	0.19	0.88	186
Slovenia	8	Cancer	-0.20	1.02	119
Slovenia	9	No Cancer	0.18	1.00	230
Slovenia	9	Cancer	0.05	0.99	94
Spain	1	No Cancer	-0.15	1.15	89
Spain	1	Cancer	-0.73	1.00	48
Spain	2	No Cancer	-0.24	0.99	165
Spain	2	Cancer	-0.39	1.09	41
Spain	4	No Cancer	-0.21	0.97	213
Spain	4	Cancer	-0.38	0.98	119
Spain	5	No Cancer	-0.24	0.97	297
Spain	5	Cancer	-0.48	1.07	273
Spain	6	No Cancer	-0.22	0.95	300
Spain	6	Cancer	-0.34	0.95	165
Spain	7	No Cancer	-0.10	1.03	250
Spain	7	Cancer	-0.31	0.92	166
Spain	8	No Cancer	0.20	0.92	127
Spain	8	Cancer	-0.27	1.13	83
Spain	9	No Cancer	-0.22	1.13	82
Spain	9	Cancer	-0.47	1.07	45
Sweden	1	No Cancer	0.15	0.85	175
Sweden	1	Cancer	0.29	0.76	138
Sweden	2	No Cancer	0.26	0.79	252
Sweden	2	Cancer	0.25	0.85	153
Sweden	4	No Cancer	0.33	0.78	234
Sweden	4	Cancer	0.11	0.78	70
Sweden	5	No Cancer	0.32	0.83	305
Sweden	5	Cancer	0.20	0.86	338

Table B. Standardized CASP-12 scores by country, wave, and cancer status (8)

Sweden	6	No Cancer	0.37	0.80	426
Sweden	6	Cancer	0.15	0.85	176
Sweden	7	No Cancer	0.41	0.72	358
Sweden	7	Cancer	0.10	0.91	146
Sweden	8	No Cancer	0.29	0.78	251
Sweden	8	Cancer	0.16	0.86	136
Sweden	9	No Cancer	0.25	0.83	227
Sweden	9	Cancer	0.20	0.79	131
Switzerland	1	No Cancer	0.42	0.83	43
Switzerland	1	Cancer	0.55	0.73	38
Switzerland	2	No Cancer	0.56	0.72	125
Switzerland	2	Cancer	0.40	1.01	48
Switzerland	4	No Cancer	0.58	0.70	275
Switzerland	4	Cancer	0.55	0.78	181
Switzerland	5	No Cancer	0.48	0.79	290
Switzerland	5	Cancer	0.39	0.76	117
Switzerland	6	No Cancer	0.58	0.80	280
Switzerland	6	Cancer	0.40	0.78	87
Switzerland	7	No Cancer	0.58	0.78	206
Switzerland	7	Cancer	0.45	0.75	116
Switzerland	8	No Cancer	0.53	0.77	164
Switzerland	8	Cancer	0.34	0.82	100
Switzerland	9	No Cancer	0.54	0.77	142
Switzerland	9	Cancer	0.42	0.75	89

Table 4. Standardized CASP-12 scores by country, wave, and cancer status (9)

Abstract in French

Titre :

Le rôle du soutien social dans la qualité de vie des personnes âgées ayant survécu à un cancer en Europe : une analyse longitudinale basée sur SHARE

Résumé :

Le nombre de survivants du cancer âgés augmente en Europe. Malgré les progrès en matière de survie, de nombreuses personnes continuent de souffrir d'une qualité de vie (QoL) réduite, liée à des problèmes de santé, des limitations fonctionnelles et un isolement social. Le soutien social est un facteur clé du bien-être, mais son rôle dans le contexte du cancer reste peu étudié chez les personnes âgées.

Cette étude a examiné l'association entre le soutien social et la QoL chez des survivants du cancer âgés de 50 ans ou plus, à partir des données des vagues 1 à 9 de l'enquête SHARE. La QoL a été mesurée à l'aide de l'échelle CASP-12, standardisée par vague (CASP-z). Le soutien fonctionnel était défini comme le fait de recevoir de l'aide, et le soutien participatif comme la participation fréquente à des activités sociales. Le soutien structurel a été exclu en raison de problèmes de colinéarité. Des modèles de régression multivariée et des modèles mixtes ont été utilisés, avec ajustement pour les variables sociodémographiques, sanitaires et contextuelles.

Le soutien fonctionnel était associé à une diminution de −0,155 écart-type du score CASP-z (IC 95 % : −0,174 à −0,137 ; $p < 0,001$). Cette association pourrait refléter une causalité inverse, une qualité de vie plus faible augmentant la probabilité de recevoir de l'aide. En revanche, le soutien participatif était positivement associé au CASP-z. Une participation fréquente à des activités sociales était liée à une augmentation de +0,096 écart-type du score CASP-z (IC 95 % : 0,068 à 0,123 ; $p < 0,001$), après ajustement.

Ces résultats suggèrent que le soutien fonctionnel reflète une vulnérabilité sous-jacente plutôt qu'un effet bénéfique. À l'inverse, la participation sociale régulière semble renforcer la QoL. Les politiques de santé devraient encourager ce type de soutien pour améliorer la vie des survivants du cancer âgés.

Mots-clés :

survivants du cancer, qualité de vie, soutien social, SHARE, vieillissement, Europe