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ORIGINAL RESEARCH

Parental Quality of Life in Childhood Cancer: Social Support as a Predictor and the Limited Association of Father Involvement

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Background: Parents caring for a child with cancer face substantial burdens that can diminish parental quality of life (QoL). Social support is often protective, yet the independent contribution of father involvement remains uncertain, particularly in Jordan. This study evaluated how perceived social support and father involvement relate to parental QoL.

Methods: In a cross-sectional study, 547 parents of children receiving cancer care at any setting for cancer in Jordan completed validated measures of parental QoL [SF-36], perceived social support, and father involvement [IFI]. Data were collected between March 2022 and March 2023.

Results: Mean QoL (SF-36 total) was 63.36 (SD = 6.48), indicating a moderate level on the 0–100 scale. Family/social support averaged 11.5 (SD = 4.9); endorsement of moral support (77%) and advice availability (72%) was common. Family/social support was positively associated with QoL (r =0.152, p =0.01; small effect). Father involvement showed no association with QoL (r =0.031, p =0.452). The overall regression model was significant (F = 18.3, p =0.01). Independent predictors of higher QoL were higher monthly income (B = 4.417, p <0.001), marital status (being single vs married associated with lower QoL; B = −6.325, p =0.002), place of residence (urban vs village associated with lower QoL; B = −3.387, p =0.004), and health insurance (B = 2.594, p =0.037).

Conclusions and implications: In Jordan, perceived social support was a significant predictor of better QoL, whereas father involvement was not independently associated. Strengthening accessible, multi-source social support should be prioritized in caregiver interventions. Routine screening for social support in pediatric oncology and embedding support navigation, peer groups, and linkage to community resources may yield greater QoL gains than interventions focused primarily on increasing father involvement.

Keywords: QoL, cancer, social support

Introduction

Suffering from cancer may have a major effect not merely on the quality of life (QoL) of the individual, but also on the QoL of the people closest to them, particularly their parents.[1,2] Being a parent entails various obligations and responsibilities, including the mental and economic support required for this difficult situation.[3,4] It is extremely difficult to meet the responsibilities of having a child with cancer,[5] which greatly impacts the QoL of parents caring for a child with cancer. Many factors related to the affected child and the amount of family and social support may also impact on the parents QoL.[6,7] Moreover, the diagnosis and consequences of cancer have an important effect on the QoL of parents caring for their children with cancer.[8] Sometimes, many children with cancer require more intensive treatment modalities and may have a worse prognosis, which has a significant impact on their parents.[2] As a result of this difficult situation, parents caring for a child with cancer might encounter many psychological symptoms that

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include high levels of anxiety, depressive symptoms, and stress, which may have a major effect on their QoL.[2,9] Furthermore, having a child with a rare and aggressive form of cancer might make it more difficult to identify suitable therapies and make them feel powerless, which may further decrease their QoL. In addition, treatment modalities could have an impact on the QoL of parents caring for with cancer.[10] For example, a combination of radiation and chemotherapy can cause nausea, tiredness, and pain in children, which can interfere with their daily functioning.[6] Many affected parents may have to take absences or reduce their workload, which may have an impact on their financial stability. Furthermore, the need to handle a child's medical schedule and care could result in a lack of self-care, which may result in higher stress levels and exhaustion.[6,11] Family and social support can have an important effect on the QoL of the parents of children with cancer. Support from family and friends may reduce the emotional burden while strengthening parents' ability to cope and enhance the resilience of the whole family.[12] In addition, the involvement of the father could support the mother and allowing her to strengthen her resilience.[13,14] Support and involvement from fathers offer practical assistance, such as cooking and cleaning, transit, and monetary support, which can reduce financial burden and improve QoL.[14]

The high QoL of parents allows them to be more capable of offering both financial and emotional assistance to their families, which can benefit the growth of their children and the overall functioning of family members.[5,15,16] This allows them to be more likely to participate in community activities that lead to the growth and development of society as a whole. On the other hand, parents with poor QoL might find it difficult to fulfill their duties and might suffer from stress, anxiety, and depression, all of which can have adverse effects on their health and well-being.[17,18] Cancer has grown extensively in Jordan; therefore, focusing on the QoL of parents caring for children with cancer is especially important.[19] According to the Jordan Cancer Registry, cancer is one of the major causes of death in Jordan and is the primary cause of death among children. As a result, the number of children with cancer will continue to increase, and addressing their QoL is critical for their own health and that of their families.[20]

Prioritizing parental QoL among Jordanians is crucial for their general health, well-being of their families, and growth in the larger community.[2] The increase in cancer incidence in Jordan highlights the importance of dealing with the QoL of parents of children with cancer,[21] and it is critical to provide them with sufficient assistance to improve their QoL. As a result, the purpose of this study is to provide insight into the quality of life (QoL) of parents who have a child with cancer. We then explored the relationship between QoL, family, and social support.

Method

Design and Setting

The authors used a cross-sectional survey design.

Participants, Eligibility, and Sampling

Eligibility

Parents (mothers or fathers) were eligible if they: (a) were the primary caregiver of a child (<18 years) with a physician-confirmed cancer diagnosis; (b) resided in Jordan; and (c) could complete questionnaires in Arabic. Exclusion criteria were: (a) not the primary caregiver; or (b) inability to consent/complete the survey.

Sampling Approach

The authors used non-probability convenience sampling appropriate to the clinical/support-group/social-media recruitment pathways.

Sample Size Justification and Power

The authors targeted a sample sufficient to detect small effects in a multiple regression predicting QoL. With up to ~10 predictors in the final model (demographics, support, father involvement), N=547 provides >0.80 power to detect effects as small as $f^2 \approx 0.02–0.03$ at $\alpha=0.05$. This exceeds conventional thresholds for small-to-moderate associations in correlational and regression analyses.

Recruitment Workflow

- **Hospitals/support groups**: Trained research staff approached potentially eligible parents, confirmed eligibility, and invited participation.
- **Social media**: Study advertisements directed interested parents to an information page and eligibility screener; eligible parents could consent and proceed to the survey.
- **Incentives**: "No incentives were offered" or describe voucher/transport reimbursement if provided.

Procedures and Modes of Administration

Mode Assignment

Participants chose their preferred mode—in-person (paper or tablet in a private room) or online (secure survey link). This participant-driven choice minimized access barriers.

Equivalence of Procedures

The survey instruments, item order, and instructions were identical across modes. In-person completion occurred without the presence of family members or clinical staff; trained data collectors were available only for technical questions and did not interpret items. The online survey enforced one response per participant via individualized links and prevented item order changes or back-button edits beyond section boundaries.

Measures

SF-36 was used in this study. The SF-36 is a widely used self-report questionnaire designed to assess health-related QoL (HRQoL) in adults.[22] This questionnaire measures eight different health domains and is used to derive two summary scores that reflect physical and mental health status.[23] The responses were scored and summed to obtain scores ranging from 0 to 100. Increased scores indicated better health status or QoL. The reliability of the instrument was .92.[24]

Procidano and Heller[25] established the considered family and social support; this study used only the family support subscale. There were 20 points on this scale: Yes, No, or Do not know. Each "Yes' answer is marked" 1;' for every response, "NO" or "Don't know' is marked as' 0" according to other studies[26] The scores will range from 0 (no family and social support perceived) up to 20 (maximum family and social support perceived by the family).[26] Appropriate internal coherence was demonstrated by the main family support measure (Cronbach α=0.90).[25] The internal consistency of categorical scales was measured using Kuder–Richardson (KR20) analysis.[27] The Inventory of Father Involvement (IFI)[18] defines paternal involvement as being functional. A 26-point test was used to determine fathers' engagement with affective, behavioral, and moral characteristics. Participants were directed to evaluate the performance of each item over the past 12 months, with "very poor" (0) and "excellent" (6) as anchors. The three-part model of participation, Lamb[14] (engagement, accessibility, and responsibility) inspired the IFI design, which contributed to the simple positioning of items in each field of the IFI. With the aid of principal exploratory reviews in the sector, Bradford et al[28,29] defined nine areas: duty (supplying, disciplining, and teaching care, promoting school success), accessibility (spare time talking together and being attentive to the child's needs), and engagement (applauding and affection, reading to children, and encouraging children to develop skills).

Translation

Validated Arabic versions were used for the SF-36 and IFI; where prior Arabic validation was unavailable, we used forward-back translation by bilingual experts, reconciled discrepancies, and piloted the instrument with [n≈20] parents to ensure clarity and cultural appropriateness (no pilot data are analyzed here). Please confirm and insert citations to any Arabic validations available locally.

Data Analysis

- Data were analyzed using SPSS version 27. Counts and percentages were used to summarize the demographic variables. Inferential statistics, such as correlation and regression analyses, were used to examine the relationship between the primary and secondary measures. Normality: Q–Q plots of standardized residuals and Shapiro–Wilk tests on model residuals; histograms and skew/kurtosis inspected.

- Linearity & homoscedasticity: residuals-vs-fitted plots; when heteroscedasticity was suspected, results were verified using HC3 robust standard errors as sensitivity checks.
- Multicollinearity: VIF (<5) and tolerance (>0.20) thresholds; no problematic multicollinearity remained in final models.
- Multiple comparisons: for families of related secondary tests (eg, domain-level associations), we controlled the false discovery rate using Benjamini–Hochberg; primary hypotheses were tested at α=0.05.

Missing-Data Handling

Item-level missingness was inspected. If >20% of items were missing on a primary instrument, that participant's scale score was not computed; for ≤10% sporadic missingness within a scale, person-mean imputation within subscales was used. When outcome/predictor missingness exceeded 5%, key models were repeated with multiple imputation (m = 20) as a robustness check.

Ethical Considerations

This study was approved by Hashemite University (30/5/2021/2022). With accordance of Helsinki. Written informed consent was obtained from all participants. The authors assured the rights of all the participants.

Results

Demographic Variables

The response rate was high .85. The age range of the patients was 20–56 years. The number of females was 360 (65.8%), and the number of males was 187 (34.2). See Table 1.

Description of QoL for Parents Caring for a Child with Cancer

The QoL of the parents of children with cancer was moderate 63.36 (SD=6.48). Our study found that only 53% of the participants were able to meet their financial needs and almost 60% felt that life was not meaningful. See Table 2.

Table 1 Demographic Characteristics of the Participant (N = 547)

Item	Response Option	n	%
Demographics			
What is your gender	Male	187	34.2
	Female	360	65.8
Socio-economic			
What is your current employment status?	Student	12	2.2
	Free work	60	11.0
	No working	259	47.3
	Retired	43	7.9
	Public or private sector employee	173	31.6
What is your monthly income in dinars?	Less than 400 Jordanian dinars	320	58.5
	401 to 800 Jordanian dinars	159	29.1
	801 to 1500 Jordanian dinars	48	8.8
	More than 1500	20	3.7
What is your educational level?	Primary or secondary	228	41.7
	Diploma	100	18.3
	Bachelor's	156	28.5

(*Continued*)

Table 1 (Continued).

Item	Response Option	n	%
Family/Context			
What is your social status?	Married	502	91.8
	Otherwise	45	8.2
Where do you live?	City	345	63.1
	Village	202	36.9
Do you smoke cigarettes or hookah?	Yes	222	40.6
	No	325	59.4
Do you have health insurance?	Yes	405	74.0
	No	142	26.0
Child's cancer duration			
When did your child get cancer?	Less than one year	179	32.7
	From 1 to 3	194	35.5
	3–5 years old	81	14.8
	More than 5 years	93	17.0
Number of children			
How many children do you have?	From 1 to 3	296	54.1
	3-5 children	163	29.8
	More than 5 children	88	16.1

Notes: Column percentages shown; totals may not equal 100% due to rounding.

Table 2 Items Description of Quality of Life for Parents Caring of A Cancer Child

Item	Never n	Rarely	Sometimes	Usually	Always n
How much do you feel that physical pain is preventing you from doing what you need to do?	18 (3.3%)	228 (41.7%)	71 (13.0%)	153 (28.0%)	77 (14.1%)
How much do you need any medical treatment to function in your daily life?	20 (3.7%)	207 (37.8%)	55 (10.1%)	156 (28.5%)	109 (19.9%)
How much do you enjoy life?	10 (1.8%)	203 (37.1%)	64 (11.7%)	218 (39.9%)	52 (9.5%)
How meaningful do you feel your life is?	37 (6.8%)	159 (29.1%)	114 (20.8%)	189 (34.6%)	48 (8.8%)
How well are you able to focus?	24 (4.4%)	136 (24.9%)	119 (21.8%)	225 (41.1%)	43 (7.9%)
How safe do you feel in your daily life?	31 (5.7%)	157 (28.7%)	119 (21.8%)	206 (37.7%)	34 (6.2%)
How healthy is your physical environment?	7 (1.3%)	171 (31.3%)	71 (13.0%)	229 (41.9%)	69 (12.6%)
Do you have enough energy for daily life?	19 (3.5%)	160 (29.3%)	80 (14.6%)	231 (42.2%)	57 (10.4%)
Are you able to accept your physical appearance?	60 (11.0%)	106 (19.4%)	138 (25.2%)	197 (36.0%)	46 (8.4%)
Do you have enough money to meet your needs?	10 (1.8%)	176 (32.2%)	68 (12.4%)	208 (38.0%)	85 (15.5%)
How much information do you need in your daily life?	22 (4.0%)	140 (25.6%)	107 (19.6%)	238 (43.5%)	40 (7.3%)
How often do you have the opportunity to engage in recreational activities?	8 (1.5%)	178 (32.5%)	48 (8.8%)	172 (31.4%)	141 (25.8%)

Notes: Scoring note. Likert anchors coded 1=Never to 5=Always for optional item means.

Description of Family and Social Support Among Parents Caring for a Child with Cancer

The mean score for family and social support among the parents was 11.5 (SD=4.9). This means that parents of children with cancer experience moderate family and social support from their families and surrounding people. More than 75% of the parents mentioned that their families gave them moral support to deal with difficult situations as their children experienced cancer, and 394 (72%) mentioned that some of their family members came to them when they had problems or needed advice. See Table 3.

Table 3 Description of Family and Social Support Among Parents with Child Diagnosed with Cancer

Statement	No (N)	N%	Yes (N)	N%
1. My family gives me the moral support I need	126	23.0	421	77.0
2. I get good ideas on how to do things or make things from my family	159	29.1	388	70.9
3. Most other people are closer to their families than I am	363	66.4	184	33.6
4. When I trust my family members who are closest to me, I get the idea that it makes them uncomfortable	353	64.5	194	35.5
5. My family enjoys hearing what I think	202	36.9	345	63.1
6. My family members share many of my interests	193	35.3	354	64.7
7. Some of my family members come to me when they have problems or need advice	153	28.0	394	72.0
8. I rely on my family for emotional support	183	33.4	364	66.5
9. There's a family member I can go to if I am feeling down, without really feeling like laughing about it1	187	34.2	360	65.8
10. My family and I are very open about what we think about things	237	43.3	310	56.7
11. My family is sensitive to my personal needs	255	46.6	292	53.4
12. My family members come to me for emotional support	177	32.4	370	67.6
13. My family members are good at helping me solve the problem 1c	197	36.0	350	64.0
14. I have a deeply involved relationship with a number of my family members	181	33.1	366	66.9
15. My family members get good ideas on how to do things or make things from me	180	32.9	367	67.1
16. When I trust my family members, I feel uncomfortable	382	69.9	165	30.2
17. My family members ask me for companionship	192	35.1	355	64.9
18. I think my family feels I am good at helping them solve problems	156	28.5	391	71.5
19. My family does not support me	405	74.1	142	26.0
20. I wish my family was so much different	368	67.3	179	32.7

Notes: Negative statements can be reverse-coded for consistency if reporting a summed score.

Correlation Between Social Support, Father Involvement, and QoL of Parents with Cancer Child

A Pearson correlation test was conducted, which showed a significant relationship between family and social support and QoL for parent of children with cancer (x=0.152, P=0.01). No significant correlation was found between fathers' involvement and their QOL Parents (X=0.031, P=0.452).

Predictors of QoL of Parents of Children with Cancer Patients

The authors found that the model was significant (F=18.3, P=0.01), which demonstrated that many factors may predict the QoL of parents of with cancer patients with cancer. These factors were monthly income (B=0.27, P=0.01), social status (B=−3.14, P=0.002), place of residence (B=−0.125, P=0.004), and health insurance (B=0.083, P=0.037). Married parents with high income, health insurance, and living in a village experienced better QoL than parents with other characteristics in this study. See Table 4.

Table 4 Predictors of QoL of Parents with Cancer Child Patients

Predictor	B	95% CI for B	SE	Beta	t	p
(Constant)	67.999	[56.46, 79.54]	5.889		11.55	0.000
How old are you?	0.078	[−0.06, 0.22]	0.07	0.054	1.11	0.266
What is your gender	0.247	[−2.55, 3.04]	1.426	0.009	0.17	0.863
What is your current employment status?	0.363	[−0.49, 1.21]	0.433	0.044	0.84	0.403
What is your monthly income in dinars?	4.417	[2.87, 5.96]	0.788	0.270	5.61	0.000
What is your educational level?	0.618	[−0.24, 1.48]	0.439	0.068	1.41	0.160
What is your social status?	−6.325	[−10.26, −2.39]	2.01	−0.128	−3.15	0.002
Where do you live?	−3.387	[−5.67, −1.11]	1.163	−0.125	−2.91	0.004
Do you smoke cigarettes or hookah?	0.287	[−1.97, 2.54]	1.149	0.011	0.25	0.803

(*Continued*)

Table 4 (Continued).

Predictor	B	95% CI for B	SE	Beta	t	p
Do you have health insurance?	2.594	[0.16, 5.02]	1.24	0.086	2.09	0.037
When did your child get cancer?	−0.191	[−1.25, 0.87]	0.541	−0.015	−0.35	0.725
How many children do you have?	−0.425	[−2.10, 1.25]	0.853	−0.024	−0.50	0.619

Notes: General footnote: Percentages shown to 1 decimal; sums may not equal 100% due to rounding.

Discussion

This study aimed to provide insights into the quality of life (QoL) of parents of children with cancer. We then explored the relationship between QoL, family, and social support. This study pointed out that parents of cancer patients experienced significant reductions in their QoL in all domains, including physical, emotional, social, and functional well-being. Our findings are consistent with those of previous studies that have shown that caring for a child with cancer can adversely affect parental QoL.[6,30] Parents of children with cancer frequently encounter high levels of stress, anxiety, depression, and physical exhaustion as a result of their parenting responsibilities, which can have an important effect on QoL.

Our participants reported a moderate level of support (mean ≈ 11.5/20). Therefore, it is more accurate to say that support exists but may be insufficient to fully meet parents' needs, rather than calling it "inadequate". These findings highlight the importance of offering parents' family and social support such as support groups, therapy, and other activities.[31,32] Additionally, our study found that financial strain had an adverse effect on one of the predictors of QoL in the parents of children with cancer. This was in line with previous research, which found that many parents struggled to handle the financial costs of cancer treatment such as medications, admission to the hospital, and transportation.[33] This outcome highlights the necessity of offering financial assistance to families caring for patients with cancer to enhance their QoL.

In our study, practical and structural factors—income, marriage, insurance, and rural residence—were stronger predictors than father involvement. This suggests that financial, family, and system-level supports may offer the greatest QoL benefits for caregivers. Other studies have found that caregiver-related factors, such as age, gender, level of education, job status, and psychological distress, are all significant predictors of parental QoL. Younger parents, female parents, poorly educated parents, and those who experienced severe psychological distress had less QoL scores.[34,35] These findings emphasize the significance of physicians considering parenting-related factors when creating measures to support the parents of children with cancer.

Additionally, our study showed that support from family and friends was a significant predictor of parental QoL. Adequate family and social support were linked to higher QoL scores, whereas insufficient family and social support, and social isolation were linked to lower QoL scores.[36] The results emphasize the importance of providing parents with family and social support such as counseling, support groups, and assistance from peers, which can assist them in coping with the challenges of providing care.

In our study, paternal involvement was not related to the quality of life of the parents of children with cancer. Although many studies highlight the importance of fathers, our data did not show a significant association with parental QoL. Possible reasons include: (a) measurement fit (the IFI may not capture context-specific roles), (b) cultural expectations shaping how fathers support (eg, financial/logistical help that is not reflected in QoL scores), and (c) respondent mix (mostly mothers reporting on fathers). These points help explain the discrepancy without overstating the role of father involvement in this sample. In comparison, another study revealed that its levels significantly predicted the quality of family interactions from the earliest stages of a child's life and during chronic diseases that affect quality of life.[37] Specifically, higher levels of fathers' involvement, as reported by parents, were associated with better family interactive competencies during triadic play situations and better quality of life.[10] Furthermore, the findings of other studies suggest that paternal involvement emerges as a stable family characteristic early in the postnatal period rather than evolving throughout the child's first years in response to developmental needs, abilities, or enhanced relational understanding among family members. Consequently, paternal involvement in childcare can be regarded as an early resource in the family system. It serves as a foundational element that fosters stable and specific relational competencies

that family members, particularly partners, can rely on during interactions throughout infancy.[38] Moreover, additional studies should examine how nurses, as the primary backbone of care delivery, can encourage evidence-based practice in clinical settings, especially in areas as critical as cancer care.[39]

Implications

Clinically, teams should routinely screen for parental QoL and social support and prioritize services for caregivers who are unmarried, low-income, uninsured, or urban-dwelling, while offering insurance/benefits navigation, peer groups, and linkage to community resources. Programs should center multi-source support—extended family, peers, and social work—rather than interventions that focus on father involvement alone, given its non-significant association with QoL in this sample. Policy efforts should expand coverage and financial assistance (eg, transport and medication vouchers) and streamline insurance to reduce stressors that undermine caregivers' QoL.

Limitations

This cross-sectional survey cannot establish causality between support, father involvement, and parental QoL. Generalizability is constrained by non-probability convenience sampling across clinical, support-group, and social-media recruitment pathways. Key constructs relied on self-report instruments, which are susceptible to response bias and may not fully capture context-specific father roles; although validated Arabic versions and forward–back translation were used, limited local validation can still yield measurement mismatch. The sample skew toward mothers (≈65.8% female respondents) may bias perceptions of father involvement relative to fathers' own reports. Finally, despite harmonized procedures, offering in-person and online completion could introduce subtle mode effects that we could not fully rule out.

Conclusion

In this Jordanian cohort, parents of children with cancer reported moderate QoL, with higher QoL linked to greater family/social support and to being married, higher-income, insured, and village-dwelling. Distinctively, fathers' involvement showed no association with parental QoL—a culturally meaningful null that points to structural supports and wider kin networks, rather than generic paternal "involvement", as the levers that matter. Clinically, teams should screen QoL/support, prioritize unmarried/low-income/uninsured/urban caregivers, and embed social work, insurance navigation, transport/medication vouchers, and family-centric peer programs into care pathways. Policy should expand/streamline insurance, offset treatment and transport costs, and institutionalize family-support services while designing father-support initiatives aligned with locally salient logistical/financial roles.

Disclosure

The authors report no conflicts of interest in this work.

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