Published in final edited form as:

Support Care Cancer. 2014 February ; 22(2): 503–511. doi:10.1007/s00520-013-2003-4.

Parental Depressive Symptoms and Childhood Cancer: The Importance of Financial Difficulties

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Abstract

Purpose—Research suggests a relationship between caring for a child with cancer and psychological distress in caregivers. Less evident is the role which financial difficulties might play in this relationship. We sought to determine if caring for a child with cancer was related to clinically relevant depressive symptoms among parents, whether or not financial difficulties mediated this relationship, and if financial difficulties were independently associated with symptoms of depression among parents of children with cancer.

Methods—Data are from 215 parents of children diagnosed with cancer or brain tumors (n=75) and a comparison group of parents of healthy children (n=140). Multiple logistic regression analyses were used to assess the factors associated with reporting clinically relevant depressive symptoms.

Results—Caring for a child with cancer was associated with increased odds of clinically relevant depressive symptoms in parents (OR: 4.93; 95% CI: 1.97 – 12.30), controlling for covariates. The mediating effect of financial burden on this relationship was not statistically significant. However, among parents of children with cancer, negative financial life events increased the likelihood of reporting symptoms of depression (OR: 4.89; 95% CI: 1.26 – 18.96).

Conclusions—Caring for a child with cancer was associated with depressive symptoms for parents. Financial difficulties were the strongest correlate of these symptoms among parents of children with cancer. Our results suggest that it may not only be the burden of caring for the child

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Conflicts of interest

None of the authors has a conflict of interest with this research.

with cancer, but also the associated financial difficulties that contribute to a higher likelihood of depressive symptoms in parents.

Keywords

pediatrics; oncology; financial burden; depressive symptoms; caregiving

Introduction

The experience of caring for a child with cancer is known to cause significant psychological distress for parents and caregivers [1–3]. Previous studies have found a relationship between caring for a child with cancer and parental depressive symptoms, quality of life, psychological stress, anxiety, and self-reported traumatic stress [4–11]. The consistency of these findings across studies has contributed significantly to our understanding of caregivers' experience in the context of pediatric cancer and has led to the availability of validated screening tools to identify parents and caregivers at risk of continued distress [12,13]. In spite of our increased understanding of the caregiver experience, it is still unknown why some caregivers are better able to cope than others faced with similar circumstances [3], suggesting that an improved understanding of the mechanisms underlying caregiver distress is needed.

Research has identified several factors associated with increased psychological distress among caregivers of pediatric cancer patients; including variables at the child-level (*e.g.* the child's behavior and the phase of the child's treatment) as well as variables at the caregiver-level (*e.g.* perceived social support, management of stress, and family cohesion) [1–4,14,15]. In keeping with the Lazarus and Folkman model of stress and coping, which posits perceived distress as the result of an internal process that depends on perceptions of available resources [16], social support has been reliably associated with better psychological symptomatology for caregivers [3,14,15,17–19]. In contrast, other characteristics (*e.g.* caregiver gender) have been more inconsistently associated with distress [1,14,18–21]. Some studies have found that psychological distress is heightened immediately for caregivers and reduces over time while other have found distress remains consistent for a year or more post-diagnosis [11]. Longitudinal work has found that although caregivers' symptoms of anxiety approach normal levels five years post-diagnosis, these symptoms are still more common than in caregivers of healthy children [2]. Higher numbers of hospitalizations have been found to be associated with caregiver psychological distress [14,22] though other studies have not found this relationship [11,18]. Evidence also suggests that if children have activity limitations [23] or functional impairments [11] these factors may be related to elevated distress in caregivers.

A relatively under-explored aspect of the pediatric cancer experience is the way it may profoundly affect family financial well-being. In managing their child's illness, families of pediatric cancer patients experience high levels of out-of-pocket expenses [24–27] and studies in the United States suggests that families are also likely to accumulate debts [25] – findings which are paralleled in international research [18,28–30]. In spite of the evidence that financial difficulties are associated with childhood cancer and the research that links financial distress to symptoms of depression in adults [31,32], researchers have not explicitly considered financial difficulties in relation to depressive symptoms for caregivers of pediatric cancer patients. It is possible that the increased financial burden associated with childhood cancer is an underlying factor influencing the psychological reactions of these caregivers. The current study is the first to explicitly explore this relationship and to consider if financial difficulties mediate parental depressive symptoms. We hypothesized that when compared with parents of healthy children, parents caring for a child with cancer

would have increased odds of reporting clinically relevant depressive symptoms. We further hypothesized that financial difficulties would mediate the relationship between being a caregiver and reporting symptoms of depression. Finally, we hypothesized that financial difficulties would be independently associated with symptoms of depression among parents of children with cancer.

Methods

This study compared a sample of parents with children ages 2–18 who had cancer or a brain tumor (hereafter, “cases”) to a group of parents with healthy children (hereafter, “comparisons”) using a case-comparison design. Eligibility for the case-group was contingent on currently or previously receiving care for the child’s condition at a local pediatric hematology or oncology clinic associated with a National Cancer Institute designated Comprehensive Cancer Center. The comparison group was recruited through a set of research registries in the surrounding community. Full details of the recruitment have been published previously [10,33].

For each child in the study, an index parent was selected for interview; parents – defined as biological, step, adoptive/foster parents, grandparents, or legal guardians – were chosen as the index parent if they were the person most involved in the care of the child. The study was approved by the Health Sciences Institutional Review Board of the University of Wisconsin-Madison. Informed consent was obtained in writing from all participants. In-person interviewer-assisted surveys were conducted between September 2008 and July 2009. For some of the case-group measures, information from medical records was used. Medical record abstraction was conducted by a trained clinician. Case-group participants provided additional written Health Insurance Portability and Accountability Act Privacy Rule (HIPAA) authorization for medical record abstraction.

Sample size

Missing data reduced the size of the initial sample from 221 participants to 215 participants (n=75 cases and n=140 comparisons). Data were missing on children’s health status (activity limitation status (n=1); hospital days for complications; (n=2)) and family income (n=3).

Measures

Some measures were obtained for case-group participants only (*e.g.* those obtained from the medical records). For clarity, we have divided the following sections by those measures that were obtained for the full sample and those that were obtained for the case-group only.

Full sample: Dependent variable

Clinically relevant depressive symptoms—The Center for Epidemiologic Studies Depression Scale (CES-D: 10) was used to assess the depressive symptoms of the index parent [34,35]. Participants were shown ten items (*e.g.* “I felt depressed” and “I could not get going”) and asked to indicate how often they felt that way during the past week on a scale from 0 (rarely: <1 day) to 3 (most days: 5–7days). These scores were summed, with possible scores ranging from 0 to 30. Participants with scores greater than or equal to 10 met the threshold for clinically relevant depressive symptoms [35].

Full sample: Independent variables and covariates

Negative financial life events—All index parents were given the Life Events Questionnaire [36] which included a subset of financial life events. Five financial life events were listed under the heading: “In the past year did any of these events occur?” If the

respondent answered affirmatively to any event, they were asked: “Was that good or bad?” The events listed were: (1) “major change in finances (increased or decreased income),” (2) “took on a moderate purchase, such as TV, car, freezer, etc...,” (3) “took on a major purchase or a mortgage loan, such as a home, business, property, etc...,” (4) “experienced a foreclosure on a mortgage or loan,” and (5) “credit rating difficulties.” If participants indicated that any of these events occurred *and* also indicated that event was “bad”, they were classified as experiencing negative financial life events.

Income—Participants reported their annual family income. As described previously [10,33], the median income for the full sample (\$90,000) was higher than the national median. For the current analysis, the income levels were divided into tertiles (*i.e.* lowest, middle, and high).

Social support—The Duke Social Support and Stress Scale [37] was used to measure the level of social support that the index parent perceived obtaining from others. Parents were asked about ten individuals or groups (*e.g.* “wife/husband” and “co-workers”), and the amount of support was rated on a three point scale with 1 indicating no support, 2 indicating some support, and 3 indicating a lot of support. The scores were summed to create a continuous measure of total social support where higher scores indicated higher levels of perceived support.

Case-group: Independent variables and covariates

Days hospitalized for complications—Information about complications during treatment for each child in the case-group was abstracted from their medical record. The total number of days that the child was hospitalized for any complications was summed.

Activity limitations—Case parents were asked if their child was “limited or prevented in any way in his/her ability to do the things most children of the same age can do?” A binary variable indicating the child’s activity limitation (yes/no) was used for analyses.

Other potential covariates

A number of variables were considered for inclusion during the construction of the final parsimonious models (see “analytic approach” for further details). For the full sample, variables were considered in our preliminary analyses due to their theoretical relationships with the dependent variable. These included parents’ age, gender, education, employment, race, parents’ partner status, and the number of people in the household. Within the case-group, we also examined children’s age, gender, treatment phase (on active treatment or maintenance vs. off treatment), time-since-diagnosis, and health insurance source.

Analytic approach

Chi-square analyses, t-tests, and Kruskal–Wallis mean-rank tests were used to examine the relationship between parental sociodemographic characteristics and clinically relevant depressive symptoms. Multiple logistic regression analyses were conducted to evaluate the association among case-status, covariates, and clinically relevant depressive symptoms. Parsimonious logistic regression models were constructed via a manual forward stepwise selection process. In the first stage, variables were added individually as potential covariates. Covariates that were significantly related to the dependent variable and/or meaningfully changed the point estimate were retained. Specifically, covariates that were statistically significant ($p < 0.05$) or impacted the depressive symptoms point estimate for case status (change in estimate $\geq 10\%$) were included in the final models. One exception was income which was included in each model *a priori*. In order to examine if financial difficulties

mediated the relationship between case status and symptoms of depression in parents, we tested for significant mediation using an approach developed by Imai [38]. Finally, case-group only analyses were conducted to test additional covariates not measured in the full sample. Case-only analyses also followed the approach to parsimonious model creation outlined above.

Results

Descriptive analysis

Table 1 shows the characteristics of the full sample by case and comparison-group status. Case-group parents were somewhat younger, had less education and income, and reported lower social support than comparison-group parents. These analyses also revealed that case-group parents were significantly more likely than comparison-group parents to report both clinically relevant depressive symptoms and negative financial life events.

The top panel of Table 2 shows bivariate comparisons grouped by the dependent variable (depressive symptoms) for the full sample. The lower panel of Table 2 shows these comparisons for the case-group only. Among the full sample, participants who reported clinically relevant depressive symptoms were also significantly more likely to report negative financial life events, lower social support, and lower average income. Within the case-group only, those who reported symptoms of depression were also more likely to report that their child had activity limitations. Case-group parents reporting clinically relevant depressive symptoms did not differ significantly from their less symptomatic counterparts with regards to their income or the number of days their children were admitted to the hospital for complications.

Multiple logistic regression analyses

Full sample—The first stage multiple logistic regression analysis using the full sample revealed that parents of children with cancer were more than five times as likely to report clinically relevant depressive symptoms as parents of healthy children (OR: 5.45; 95% CI: 2.24 – 13.23) (Table 3, “Stage 1”). When negative financial life events were included in the model in the second stage, this effect was attenuated but remained statistically significant (OR: 4.93; 95% CI: 1.97 – 12.30) (Table 3, “Stage 2”). Moreover, having a negative financial life event was independently associated with a likelihood of reporting symptoms of depression that was nearly four times greater than among those who did not report such events (OR: 3.73; 95% CI: 1.52–9.13). However, mediation of the effect of case status on depressive symptoms by negative financial life events did not achieve significance ($p=0.11$).¹

Case-group—In the case-group analysis, negative financial life events were associated with nearly five times the likelihood of reporting clinically relevant depressive symptoms (OR: 4.89; 95% CI: 1.26–18.96), even controlling for other characteristics of the child’s health status (Table 4). For case-group parents, having a child who spent additional days in the hospital for complications was associated with a lower likelihood of these symptoms (OR: 0.97; 95% CI: 0.94–1.00).² Additionally, higher social support was associated with a lower likelihood of reporting clinically relevant symptoms of depression (OR: 0.95; 95% CI: 0.91–0.99).

¹The test for mediation was significant before adding covariates ($p=0.007$) suggesting that we may have been underpowered to detect the effect.

²This finding did reach statistical significance ($p=0.023$). However, the upper end of the confidence interval is 1.00 by rounding to the second decimal place.

Sensitivity analysis—Due to the wording of the negative life events questionnaire (*i.e.* participants were asked about events “in the past year”) the possibility exists that a sub-set of case-group parents reported on a negative financial life event that occurred *before* their child’s cancer diagnosis. A sensitivity analysis was conducted in which participants with children who had been diagnosed less than one year prior to the interview were excluded from the data set ($n=17$). The model was robust to this specification. However, the odds ratio for negative financial events was slightly higher in both the full and case-only analyses suggesting that our reported point-estimates for this measure may be somewhat conservative (data not shown).

Discussion

Our results show that caring for a child with cancer is associated with clinically relevant depressive symptoms among parents, lending confirmation to previous studies reporting worse mental health outcomes for parents of children with cancer [1–11]. Financial difficulties were not found to significantly mediate this relationship. However, our results suggest that financial difficulties, in addition to caregiving status, independently contribute to depressive symptoms among parents. Further, this study provides evidence that financial difficulties are significantly associated with clinically relevant depressive symptoms for parents of children with cancer, even after controlling for income, social support, and other child health factors. In sum, these results suggest that financial difficulties may be an important contributor to the development of poor mental health among parents of pediatric cancer patients.

Financial difficulties may be particularly pronounced for parents of children with cancer. Families of pediatric cancer patients are likely to have additional expenses (*e.g.* travel and overnight stays) [26] beyond those covered by insurance. These additional costs have the potential to lead to long term financial problems. Research finds that as many as one third of personal bankruptcies are related to health [39,40]. For parents of pediatric cancer patients, social support from friends, relatives, and/or their surrounding community may be particularly helpful in alleviating some of the burden associated with caring for a child with cancer. Our findings confirm previously identified associations between higher levels of social support and a lower likelihood of depressive symptoms for parents of children with cancer [4,15].

The total number of days that case-group children were hospitalized for complications was associated with a lower likelihood of clinically relevant depressive symptoms. This result was somewhat counter-intuitive. To the extent that our measure served as a proxy for continued treatment, it would seem it should be related with maintained or increased distress for caregivers. This may also be true if longer treatment meant additional costs for caregivers. On the other hand, there is some evidence shows that the length of time since a child’s diagnosis is related to *lower* levels of psychological distress in caregivers [2]. It is possible that the passage of time since the initial shock of diagnosis is partially responsible for this improvement. It should be noted, however, that both “treatment phase” and “time-since diagnosis” were considered in the construction of our initial models and not retained in the parsimonious model, although our sample size may have limited our power to detect effects. Another possibility is that having a child carefully monitored in a hospital setting provides some relief to parents – or that the support received by parents during inpatient stays was not fully captured by our social support measure. This corresponds with at least one other study of caregivers that found that those caring for chronically ill children listed medical professionals as sources of social support significantly more often than those with healthy children [41]. Finally, frequent interactions with the health care system could potentially increase the chance that difficulties experienced by caregivers could come to the

attention of health care professionals. If such interactions led to referrals to social workers or to needed mental health services, this additional support could combat the onset or continuance of depressive symptoms among parents.

Implications for practice and policy

This study has potential implications for both clinical practice and health policy. Studies show that clinical depression in parents is associated with negative mental health outcomes for their children [42,43]. As such, protecting the financial stability of families of children with cancer has the potential to mitigate psychological distress for *both* parents and pediatric cancer patients. To the extent reasonable, clinicians and hospital staff may want to foster an awareness of families' financial struggles in order to identify those at high risk of poor psychological outcomes. Families in need could be referred to social workers who may be aware of supportive resources. Validated screening tools already exist that provide clinic staff with the opportunity to identify parents most at risk of long-term distress [12,13]. The use of such screeners has grown in recent years, but there is still room to expand their use further. Additionally, successful psychosocial interventions for parents of recently diagnosed pediatric cancer patients already exist and may be of use to clinicians and staff who identify at risk parents [44,45]. Our study suggests that such interventions may work best if augmented by financial support mechanisms.

At the policy level, states might consider providing social and/or financial support to caregivers. A few states have programs available through Medicaid which allow elderly patients to request paid assistance by a relative or other caregiver. The Department of Veterans Affairs provides a stipend with travel expenses, health insurance, and access to mental health services and counseling to primary eligible caregivers. Similar programs aimed at families of pediatric cancer patients could simultaneously provide support for the patient while relieving financial burden – and likely the concurrent psychological distress – for caregivers. In the private sector, employer-based services (*e.g.* paid leave or employee assistance programs) are other avenues by which families could be supported through their child's illness. Grouped together such efforts have the potential to improve the health and well-being of caregivers and children with cancer.

Potential limitations

This study is the first to explicitly consider the relationship between financial difficulties and depressive symptoms for parents of children with cancer. However, the cross-sectional nature of this study limits our ability to make causal inferences. Moreover, the limited sample size may have contributed to the lack of statistical significance in the test for mediation and restricted our power to observe associations in some covariates that were rejected during parsimonious model selection, particularly for the case-only analysis (*e.g.* treatment phase, health insurance source etc...). We were also unable to control for factors that might play a role in parents' symptoms of depression, such as parents' history of depression or other mental health problems. Finally, this study was conducted using a convenience sample from a metropolitan area of the Midwestern United States. As such, our findings may not be generalizable to all populations.

The present study found financial distress was associated with depressive symptoms in a relatively financially well-off sample. It is possible that this relationship would be moderated for those with lower incomes. Differences between case and comparison parents with regard to income in our sample are pronounced and it is possible that our model does not capture all the variation associated with those differences. We considered parents' educational level as a potential measure of socioeconomic status in our preliminary analysis; however, that variable was retained in the parsimonious model. A larger study may find a

connection between education and psychological distress that we were unable to uncover. Furthermore, the cross-sectional nature of our data does not allow us to explore the potential for reverse causality in which the child's diagnosis led parents to make employment changes that could have reduced income. This explanation would be in line with findings that suggest caregivers may undergo employment changes in the wake of their child's cancer diagnosis [18]. Future studies should consider this possibility in greater detail.

Future studies

Further research is needed to better understand the underlying phenomena highlighted by these findings. Additional tests for mediation would improve our understanding. Longitudinal studies that consider families' financial status and mental health across time could help to tease apart causation. The post-treatment financial and mental health of parents should also be considered – as should the kinds of financial difficulties caregivers experienced (*e.g.* transportation, overnight stays, medication etc...). Additionally, it is critical to consider both relative and absolute financial burden as families at different levels of the financial spectrum may experience financial distress in different ways. Studies that can obtain larger samples should consider covariates such as treatment phase and health insurance coverage which we were limited in our ability to assess.

Conclusions

This is the first study to look at the associations between financial difficulties and depressive symptoms for parents of children with cancer. Our findings suggest that financial difficulties have a strong independent association with depressive symptoms among these parents. Moreover, our findings suggest that efforts to ameliorate financial difficulties for parents of pediatric cancer patients may improve mental health for these parents and their children.

Acknowledgments

We would like to thank the families who participated in this study, as well as the clinical and research staff who were instrumental to study recruitment. This research was supported by a grant from the National Institute of Child Health and Human Development (HD049533, W. P. Witt, Principal Investigator and Waisman Center P30 HD03352, M. M. Seltzer, Principal Investigator), UW Comprehensive Cancer Center Investigator Initiated Trial (W. P. Witt, Principal Investigator), an Agency for Healthcare Research and Quality T-32 training grant (HS00083, M. Smith, Principal Investigator), and the UW Care for Kids Foundation (W. P. Witt, Principal Investigator).

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Table 1

Characteristics of parents of children with cancer or brain tumors (“Cases”) and parents of healthy children (“Comparisons”)

Sociodemographic factors	Cases % or μ (SD)	Comparisons % or μ (SD)	p-value
<i>Total: n=215</i>	<i>n=75</i>	<i>n=140</i>	
Parental depressive symptoms^a			
Yes	30.7%	6.4%	<i><0.001</i>
No	69.3%	93.6%	
Negative financial life events (1 event)			
None	65.3%	79.3%	<i>0.025</i>
One or more	34.7%	20.7%	
Parental social support^b			
Total social support from all sources	67.7 (18.6)	72.8 (16.8)	<i>0.043</i>
Number of people in the household			
Mean number of people	4.3 (4.0)	4.3 (4.0)	<i>0.956</i>
Household income (Tertiles)			
Tertile 1 (Lowest)	41.3%	25.7%	<i>0.060</i>
Tertile 2 (Middle)	30.7%	37.1%	
Tertile 3 (Highest)	28.0%	37.1%	
Parent age			
Age (in years) of reference parent	40.1 (6.4)	42.7 (5.9)	<i>0.052</i>
Parent gender			
Male	8.0%	11.0%	<i>0.429</i>
Female	92.0%	89.0%	
Parental education			
High School	13.3%	5.0%	<i>0.014</i>
Some college	33.3%	20.7%	
College graduate	29.3%	41.4%	
Professional degree	24.0%	32.9%	
Parental employment			
Employed full-time	45.3%	46.4%	<i>0.624</i>
Employed part-time	34.7%	38.6%	
Not employed outside the home	20.0%	15.0%	
Parent race			
Non-white	5.3%	3.6%	<i>0.539</i>
White	94.7%	96.4%	

Sociodemographic factors	Cases % or μ (SD)	Comparisons % or μ (SD)	p-value
Parental partner status			
Single	6.7%	2.1%	0.095
Married / partnered	93.3%	97.9%	
Child age			
Age (in years) of reference child	9.9 (4.8)	9.4 (4.0)	0.382
Child gender			
Male	46.7%	50.1%	0.444
Female	53.3%	49.9%	
Health insurance (child) ^c			
Private	84.0%	97.1%	0.001
Public	14.7%	2.9%	
Missing	1.3%	0.0%	

Note: μ = Mean, SD = standard deviation, NS = Non-significant

Column percentages are presented

^a“Yes” indicates a score of ≥ 10 on the Center for Epidemiological Studies Depression scale (CESD: 10)

^b Higher values indicate greater support

^c p-value reflects chi-square test with missing case excluded

Table 2

Associations between covariates and clinically relevant depressive symptoms for parents

	Depressive symptoms ^a		p-value
	Yes % or μ (SD)	No % or μ (SD)	
Full sample			
Total: n=215	n=32	n=183	
Case status^b			
Case	71.9%	28.4%	<0.001
Comparison	28.1%	71.6%	
Negative financial life events (1 event)			
No	43.8%	79.8%	<0.001
Yes	56.3%	20.2%	
Total social support^c			
	57.82 (17.28)	73.32 (16.67)	<0.001
Household income (Tertiles)			
Tertile 1 (Lowest)	53.1%	27.3%	0.014
Tertile 2 (Middle)	25.0%	36.6%	
Tertile 3 (Highest)	21.9%	36.1%	
Case only			
Total: n=75	n=23	n=52	
Negative financial life events (1 event)			
No	47.8%	73.1%	0.034
Yes	52.2%	26.9%	
Child has activity limitation			
No	26.1%	51.9%	0.038
Yes	73.9%	48.1%	
Days admitted for complications			
	15.65 (17.61)	20.65 (28.96)	0.776
Total social support^c			
	58.50 (15.81)	71.77 (18.44)	0.004
Household income (Tertiles)			
Tertile 1 (Lowest)	56.5%	34.6%	0.071
Tertile 2 (Middle)	13.0%	38.5%	
Tertile 3 (Highest)	30.4%	26.9%	

Note: μ = Mean, SD = standard deviation

Column percentages are presented

^a“Yes” indicates a score of ≥ 10 on the Center for Epidemiological Studies Depression scale (CESD: 10)

^b“Case” = parents of children with cancer or brain tumors and “Comparison” = parents of healthy children

^cHigher values indicate greater support

Table 3

Odds of parental depressive symptoms: Staged multiple logistic regression analyses (Full sample)

	Stage 1		Stage 2	
Dependent variable: Depressive symptoms (“Yes” = 1) ^a	<i>Odds Ratio</i>	<i>95% Confidence Interval</i>	<i>Odds Ratio</i>	<i>95% Confidence Interval</i>
Case status ^b				
Comparison	1.00	Reference	1.00	Reference
Case	5.45	2.24 – 13.23	4.93	1.97 – 12.30
Negative financial life events (1=“ 1 event”)				
No	1.00	Reference	1.00	Reference
Yes	-	-	3.73	1.52 – 9.13
Household income (Tertiles)				
Tertile 1 (Lowest)	1.00	Reference	1.00	Reference
Tertile 2 (Middle)	0.60	0.21 – 1.67	0.58	0.20 – 1.71
Tertile 3 (Highest)	0.62	0.21 – 1.82	0.80	0.26 – 2.42
Total social support ^c	0.96	0.93 – 0.98	0.96	0.93 – 0.98

^a“Yes” indicates a score of ≥ 10 on the Center for Epidemiological Studies Depression scale (CESD: 10)

^b“Case” = parents of children with cancer or brain tumors and “Comparison” = parents of healthy children

^cHigher values indicate greater support

Table 4

Odds of parental depressive symptoms: Multiple logistic regression analyses (Case-only)

Dependent variable: Depressive symptoms (“Yes” = 1) ^a	Odds Ratio	95% Confidence Interval
Negative financial life events (“ 1 event”)		
No	1.00	Reference
Yes	4.89	1.26 – 18.96
Household income (Tertiles)		
Tertile 1 (Lowest)	1.00	Reference
Tertile 2 (Middle)	0.29	0.52 – 1.63
Tertile 3 (Highest)	2.01	0.44 – 9.17
Total social support ^b	0.95	0.91 – 0.99
Child has activity limitations		
No	1.00	Reference
Yes	3.04	0.86 – 10.84
Number of days admitted for complications	0.97	0.94 – 1.00

^a“Yes” indicates a score of ≥ 10 on the Center for Epidemiological Studies Depression scale (CESD: 10)

^bHigher values indicate greater support