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Demographic, Medical, and Psychosocial Predictors of Benefit Finding among Caregivers of Childhood Cancer Survivors

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Abstract

Objective—There is a growing body of literature examining benefit finding, or finding positive outcomes in the face of adversity, among both adults and children with chronic conditions, and to some degree among caregivers. This study examined demographic, medical, and psychosocial predictors of greater benefit finding specifically among caregivers of childhood cancer survivors.

Methods—Caregivers of children who had completed treatment for cancer ($n=83$) completed measures assessing child and caregiver demographic information and caregiver coping (active, acceptance, emotion-focused, and avoidant), optimism, social support, caregiving burden, post-traumatic stress symptoms, illness impact (how much caregivers feel impacted by their child's illness in various domains), and benefit finding (positive outcomes).

Results—Regression analyses indicated that positive spiritual coping, optimism, and illness impact uniquely predicted overall benefit finding for caregivers of childhood cancer survivors.

Conclusions—Results point to adaptive tendencies that are associated with finding benefits when caring for a childhood cancer survivor and suggest potential avenues for intervention among this population.

Keywords

Cancer; oncology; survivorship; caregivers; benefit finding

Background

Approximately 10,400 children are diagnosed with cancer every year in the United States [1]. Although cancer is the second leading cause of pediatric death [2], advances in medical treatment have led to improved prognosis for youth diagnosed with cancer. Overall cure rates for children with cancer are approaching 85% [3]. Consequently, most children diagnosed with cancer survive well into adulthood. With increased survival rates focus has shifted to examining long-term physical and psychological outcomes for childhood cancer survivors and their adult caregivers. In particular, caregivers of childhood cancer survivors may experience practical and psychological difficulties during treatment that may continue post-completion of their child's medical therapy [4-8]. Although the definition of survivor varies among researchers, the term survivor will be used here to represent children who have completed treatment for cancer. The challenges associated with caring for a child with cancer include managing complex in-home medical treatment regimens [4], taking time off work to care for children, managing diagnosis and treatment-related medical effects [5], and continued involvement in their child's medical care into survivorship [6]. Together, these challenges increase distress among caregivers [7]. Accordingly, many studies on psychological adjustment of caregivers focus on negative outcomes including emotional distress and trauma symptoms [8].

Less studied in relation to caregiver's experience with childhood cancer are positive outcomes, termed benefit finding [9]. Other terminology used to represent these positive outcomes includes posttraumatic growth or stress-related growth, which represent similar constructs. Posttraumatic growth is defined as "positive psychological change experienced as a result of the struggle with highly challenging life circumstances," which, similar to benefit finding, has been explored among medical populations and individuals who suffer other traumatic experiences (e.g., natural disasters, abuse) [10]. Stress-related growth references growth from negative events among medical populations and community samples reporting on their "most stressful experience" [11]. These constructs refer to changes following an adverse event but vary in terms of the conceptualization of change as either internal growth from baseline levels of functioning (i.e., posttraumatic growth) or positive additions to one's life in either internal or external domains (i.e., benefit finding). Although the definitions of each construct vary to some degree, many researchers use these terms interchangeably.

Several theoretical frameworks have been developed to better understand benefit finding as an outcome. For example, Tedeschi and Calhoun suggest that benefit finding occurs from a combination of characteristics of the individual, how one manages the distress associated with a challenging event (e.g., coping), rumination (e.g., automatic thoughts), self-disclosure (e.g., prayer), and social support [10]. Research among adults and children with chronic conditions points to several psychosocial variables that may influence benefit finding among individuals with chronic health conditions: optimistic world-view [13-15], active and acceptance coping [12, 16], practicing of religion [12,16], and greater perceived impact of the illness [14,17].

Only a few studies have examined benefit finding among caregivers, and fewer studies have included caregivers of children with cancer. These studies show that 90% of mothers and

80% of fathers of childhood cancer survivors found at least one benefit in having a child diagnosed with cancer [17]. Domains of benefit are similar to those endorsed by other adult and child populations and include changed life perspective, emotional growth, family integration, and healthier lifestyle [18]. Personality traits such as optimism (among mothers and fathers) and spirituality (among mothers) are associated with greater perception of benefit among caregivers of children with chronic health conditions [19]. Mental health symptoms, conceptualized as posttraumatic stress symptoms, also are associated with greater benefit finding among caregivers of children with cancer [20]. Parenting and caregiving responsibilities also are associated with benefit finding. Specifically, those with greater caregiving demand, especially among mothers of children with cancer, report greater benefit finding [21]. Finally, the perception of better quality family relationships contributed prospectively to benefit finding among caregivers of children with cancer or Type 1 diabetes [22].

Given gaps in the literature on benefit finding specifically focused on caregivers of childhood cancer survivors, and to explore the predictive utility of each influence on benefit finding, the present study was designed to better understand demographic, disease, and psychosocial predictors of benefit finding specifically among this population. Variables were selected for inclusion in this study based on variables investigated in past research and frameworks suggesting avenues for benefit finding [10]. Based on findings among adult and pediatric cancer patients, we hypothesized greater benefit finding would be associated with greater child disease severity, and the following caregiver variables: use of problem-focused and religious coping, post-traumatic stress symptoms, optimism, perceived social support, increased caregiver demand, and greater illness impact.

Methods

Participants

Eighty-three caregivers of childhood cancer survivors participated. Demographic data for children and caregivers are presented in Table 1. Inclusion criteria included (1) child off-treatment for cancer for at least one year; and (2) caregiver speaks English.

Procedure

Caregivers of childhood cancer survivors from a large tertiary care facility in the southeast U.S. were recruited during their child's routine outpatient follow-up oncology clinic visit. Eligible families were mailed a letter describing the purpose of the study and approached in person during their child's clinic appointment. After providing informed consent, caregivers completed the questionnaires independently and turned them in when complete. Participants were compensated with a \$10 gift card for their time. The study was approved by the university Institutional Review Board (IRB).

Measures

Caregivers completed 10 questionnaires, detailed below.

Benefit Finding—Caregivers completed the Benefit Finding Scale [23], a 17-item self-report measure of perceived benefits from having had a child with cancer (e.g., brought my family closer together; helped me become a stronger person). Responses were recorded using a 5-point scale ranging from “not at all” (1) to “extremely” (5), and averaged to create a total benefit finding score, with higher scores indicating greater benefit finding ($\alpha = .96$). Among adult samples, benefit finding correlates positively with positive emotions and inversely with distress.

Coping—Caregivers completed 52 items from the COPE [24], which assesses how people deal with challenges. Caregivers were asked how they coped with having had a child with cancer, both past and present (e.g., I try to get advice from someone about what to do; I refuse to believe that it happened), rated on a four-point scale from “I don't do this at all” (1) to “I do this a lot” (4). The items load onto four factors: Active Coping, Emotion-Focused Coping, Avoidant Coping, and Acceptance Coping, each with 8-16 items $\alpha=.75-.88$) [25]. Higher scores indicate greater use of each strategy.

Spiritual Coping—Caregivers completed the Brief RCOPE [26], a self-report measure of positive and negative religious/spiritual coping strategies. Seven items represent positive spiritual coping (seeking spiritual support/collaboration from God; benevolent religious reappraisals) and 7 items represent negative spiritual coping (interpersonal spiritual discontentment; negative reappraisals of God's powers). Participants described how frequently they use different strategies to respond to a specific stressor, specifically caring for a child with cancer both in the past and at present (e.g., Looked for a stronger connection with God; Felt punished by God for my lack of devotion), rated on a four-point scale from “not at all” (1) to “a great deal” (4). Items from positive ($\alpha=.87$) and negative ($\alpha=.77$) spiritual coping domains were averaged to form the two scales. Higher scores indicate higher levels of positive and negative spiritual coping, respectively. This measure is related to physical and psychological health outcomes [26].

Caregiving Burden—Caregivers completed the Caregiving Burden Inventory [27], a 24-item measure that assesses five domains of caregiving burden from caring for a survivor of childhood cancer: time-dependence burden (e.g., I have to help my child with many basic functions), developmental burden (e.g., I feel that I am missing out on life), physical burden (e.g., I'm not getting enough sleep), social burden (e.g., I don't get along as well as I used to with others), and emotional burden (e.g., I feel angry about my interactions with my child). Caregivers rated items on a five-point scale ranging from “never” (1) to “always” (5). Responses were averaged for a total caregiving burden score with higher scores indicating greater burden ($\alpha=.91$). This scale also demonstrates good construct validity [27].

Illness Impact—Caregivers completed the Impact of Illness Scale [28], a 9-item measure exploring limitations in the caregiver's daily roles due to having had a child with cancer. Domains assessed include impact on personal care, fulfilling family obligations, and recreational activities. Participants rated how much having had a child with cancer has impacted their functioning over the past several months in these domains (e.g., To what extent has your capacity to take part in enjoyable recreational activities been reduced by

having had a child with cancer?) Items were rated on a four-point scale ranging from “not at all” (1) to “fully” (4). Responses were averaged for an overall impact score ($\alpha=.91$), with higher scores representing greater negative impact of their child's illness. This scale demonstrates adequate construct validity [28].

Post-traumatic Stress—Caregivers completed the Post-Traumatic Stress Disorder Checklist-Civilian Version (PCL-C) [29], a 17-item measure covering the three primary clusters of symptoms: re-experiencing, avoidance, and hyperarousal. Participants rated the extent to which they have been bothered by problems/complaints in the last month due to having had a child with cancer (e.g., Repeated, disturbing memories, thoughts, or images of a stressful experience in the past). Items were rated on a five-point scale ranging from “not at all” (1) to “extremely” (5), and averaged for a total severity score ($\alpha=.95$). This scale demonstrates high convergent validity [30].

Optimism—Caregivers completed the Life-Orientation Test-Revised (LOT-R) [31], a 10-item self-report instrument measuring individual differences in generalized optimism. Participants rated statements reflecting their level of optimism (e.g., In uncertain times, I usually expect the best). Questions were answered on a five-point rating scale ranging from “I disagree a lot” (1) to “I agree a lot” (5). After reversing negatively worded items and removing 4 filler items, responses were averaged with higher scores representing higher levels of optimism ($\alpha=.83$). This measure demonstrates differential concurrent validity with pessimism [32].

Social Support—Caregivers completed the Social Provisions Scale (SPS) [33], a 24-item measure assessing six supportive functions, including attachment, social integration, reassurance of worth, reliable alliance, guidance, and opportunity for nurturance. Participants were asked to consider their current relationships with friends, family, community, and coworkers and rate their agreement with how much support they receive (e.g., There are people I can depend on to help me if I really need it). Responses were rated on a four-point scale ranging from “strongly disagree” (1) to “strongly agree” (4). After reversing negatively worded items, responses were averaged for a total social provisions score ($\alpha=.84$). This measure demonstrates positive correlations with other social support measures [33].

Demographic and disease variables—Caregivers provided demographic information, including the child's age, gender, and ethnicity. Caregivers also reported on their own age, relationship to child, ethnicity, education level, religious preference, family's annual income, family composition, marital status, and zip code from which urban/rural designation was determined. Ethnicity was recoded into a dichotomous variable representing minority vs. White. Education level was recoded into a dichotomous variable representing completed college/higher education vs. completion of high school/lower education. Marital status was recoded into a dichotomous variable representing married vs. not married.

Medical information was extracted from the child's medical chart and included diagnosis (coded as leukemia, brain tumor [BT], or other non-CNS solid tumor/lymphoma), age at diagnosis (years), treatment length (months), number of treatment modalities (coded as 1

modality vs. 2 modalities), relapse (coded as relapsed vs. did not relapse), and time since treatment ended (years). The child's treatment intensity was measured with the Intensity of Treatment Rating-2 (ITR-2) [34]. This scale assesses the intensity of disease and treatment modality ranging from "least intensive" (1) to "most intensive" (4) based on diagnosis, stage or risk level, and treatment modality. After establishing initial reliability with an oncology nurse practitioner (25% of participants; $\kappa=.93$) and resolving differences through discussion, the first author completed these ratings for participants.

Data Analysis Plan

Missing data were examined (<1% of data points) and imputed using the EM algorithm. Univariate descriptive statistics identified three outliers which were truncated to 3.5 standard deviations from the mean.

Then, correlations among all variables were examined. Predictors that were correlated with overall benefit finding at $p < .10$ were entered into a hierarchical multiple regression predicting benefit finding [35]. Medical and demographic variables were entered in Step 1 of the regression model. To test the predictive utility of each psychosocial variable over medical and demographic factors, psychosocial variables were entered in Step 2 in separate regression models. Then, all psychosocial variables were entered together at Step 2 to examine the unique predictive utility of each variable over all other variables.

Secondary analyses examined predictors of the six domains of benefit finding, following a similar analytic sequence. Only predictors that were correlated with each domain of benefit finding at $p < .10$ were entered. Step 1 included demographic and medical variables; all psychosocial predictors were entered simultaneously in Step 2. Assumptions of multiple regressions were evaluated for all regression models, and no violations were found.

Results

Preliminary Analyses

As shown in Table 1, caregivers' children were on average 14.01 years old ($SD = 5.19$) at the time of study, including about equal proportions of males and females. Slightly less than half had a diagnosis of leukemia, 16% had a diagnosis of brain tumor, and 42% had a diagnosis of other non-CNS solid tumor/lymphoma (e.g., Ewing's sarcoma, osteosarcoma, rhabdomyosarcoma, Wilm's tumor). On average, children were 5.93 years of age ($SD = 4.76$) at the time of diagnosis and 5.71 years past completing medical treatment ($SD = 4.31$) with moderate treatment intensity. Caregivers were mostly females from non-rural geographic locations. Median family annual income was \$70,000, with average income ranging between \$40,000-\$80,000. Most caregivers were married.

As shown in Table 1, caregivers on average reported that they experienced posttraumatic stress symptoms a little bit to not at all and caregiving burden rarely to never (98% of caregivers); utilized negative spiritual coping somewhat to not at all (100%); and felt their child's disease currently impacted them a little to not at all (100%). In contrast, caregivers reported that they utilized positive spiritual coping quite a bit to a great deal (71%); agreed or strongly agreed that they received social support (88%); agreed they had an optimistic

world view (78%); and felt that their child's cancer experience made contributions to their lives quite a bit to extremely (57%).

Benefit finding was unrelated to demographic variables. Associations between benefit finding and the three diagnosis groups were examined, and only diagnosis of leukemia was associated with benefit finding; therefore, this variable was coded as diagnosis of leukemia versus other diagnoses. Additionally, receiving only one treatment modality (i.e., surgery, chemotherapy, or radiation) was associated with greater benefit finding. Higher levels of active, emotion, and positive spiritual coping, social support, and optimism were related to greater benefit finding. Illness impact was associated with less benefit finding, contrary to predictions. Table 2 presents a correlation matrix of all predictors correlated with benefit finding at $p < .10$. Evaluation of multicollinearity risk yielded one correlation of concern, between child diagnosis of leukemia and receiving multiple treatment modalities ($r = -.79$). Thus, diagnosis of leukemia was omitted from the regression analyses, because it was deemed less general than treatment modalities.

Primary Analyses

Multiple regressions predicting benefit finding appear in Table 3. At Step 1, multiple treatment modalities, experiencing relapse, and family income explained 11% of variance in benefit finding, but no variable was a unique predictor. When each psychosocial variable was entered by itself ('Step 1 adjusted models' in Table 3), emotion-focused coping, positive spiritual coping, social support, optimism, and illness impact each uniquely predicted benefit finding above the demographic and medical variables (R^2 range from .07-.24, p s $< .05$). In the fully adjusted model where all psychosocial variables were entered together at Step 2, positive spiritual coping, optimism, and illness impact emerged as unique significant predictors of benefit finding. This fully adjusted model explained 46% of the variance in benefit finding.

Conclusions

This study investigated multiple predictors of benefit finding among caregivers of childhood cancer survivors. The results suggest that despite the stressors associated with caring for a child with cancer, caregivers of childhood cancer survivors generally report finding positive changes from having gone through the experience. Caregivers of children who received only one treatment modality, did not experience a relapse, and had a higher family annual income tended to report somewhat greater benefits from their experience. However, these variables did not uniquely predict benefit finding after accounting for psychosocial variables. Optimism, positive spiritual coping, and lower illness impact emerged as unique psychosocial predictors of benefit finding after controlling for demographic, medical, and psychosocial factors.

Predictors of Benefit Finding

The results of this study resonate with previously reported inconsistent associations between benefit finding and demographic and medical variables found in other populations [36]. Thus, benefit finding seems to extend across many demographic groups and medical

populations. Our findings extend previous results of greater benefit finding among childhood survivors of leukemia compared to other cancers [14], which perhaps could be explained by lower number of treatment modalities among patients with leukemia. Specifically, leukemia survivors in our sample typically received only one treatment modality (chemotherapy), and receiving only one treatment modality was associated with greater benefit finding. However, it may also be that parents of children with leukemia experience greater benefits due to the better prognosis and greater survival rate of leukemia compared to other diagnoses [3].

Interestingly, benefit finding was more consistently related to a number of positive psychosocial factors, including optimism, positive spiritual coping, emotion-focused coping, and social support, but was typically unrelated to the use of negative strategies such as negative spiritual coping, avoidant coping, and caregiving burden. These results point to the nature of benefit finding as an active experience in which one arrives at positive adaptation through the use of positive strategies [37], but not necessarily through the absence of negative factors. In fact, past research among other varied populations suggests that benefit finding can occur even in the presence of significant negative psychological adjustment [38], although negative psychological adjustment was generally not related to benefit finding among caregivers in our study.

Although this cross-sectional study does not elucidate the mechanisms that lead to benefit finding, some have suggested that optimism may contribute to finding benefits indirectly through greater use of adaptive coping strategies [39]. Additionally, spiritual or religious coping has consistently been related to making meaning of one's experience and finding benefits among different populations including adult breast cancer survivors and caregivers of children with Asperger's Syndrome [16,40]. Researchers speculate that optimism, spiritual coping, and social support all promote interpretation of a difficult situation in a favorable light by helping to make sense of the event and encouraging the use of positive coping strategies [41]. Cotton and colleagues [42] suggested greater optimism predicts greater use of spiritual coping strategies, and this strategy may be particularly important for promoting positive psychological adaptation after a stressful experience. Taken together, it seems likely that optimism, positive spiritual coping, and benefit finding are interrelated. Potential mediating causal paths should be elucidated in longitudinal research.

Surprisingly, social support did not uniquely predict benefit finding in the fully adjusted models, possibly because of its association with spiritual coping ($r = .33$). This may be due to overlap with other predictor variables. Specifically, those who engage in positive spiritual coping may have access to additional sources of social support, such as someone in their spiritual community, which may facilitate positive adaptation. Further, it has been suggested that spirituality promotes a sense of community [41], and therefore, the overlap between the two constructs may mask the individual effect of social support that emerged in bivariate and partially-adjusted analyses. More broadly, and as mentioned above, there is likely conceptual overlap among predictor variables which may lead to reduced unique effects of psychosocial variables on caregivers' benefit finding. For example, spiritual/religious coping promotes well-being beyond that the effects of general coping methods [26]. Thus, it is likely that spiritual coping includes aspects of general coping mechanisms (in our sample, religious coping correlated $r = .39$ with emotion-focused coping and $r = .22$ with acceptance coping),

but also represents a unique coping strategy. As mentioned above, there is also likely overlap between social support, positive spiritual coping, other forms of coping, and optimism. Our results suggest potentially shared variance among these variables in predicting benefit finding but also unique contributions of individual variables

Contrary to past research with childhood cancer survivors [14,17], greater illness impact was related to finding not more but *fewer* benefits. However, caregivers in our sample reported that their child's illness impacted them a little to not at all in the present day, likely because their children had been off treatment for several years. Interestingly, caregivers who experienced the most impact of their child's illness had children who were brain tumor survivors, perhaps suggesting that these children experienced more lasting negative effects (i.e., late effects) from their diagnosis/treatment, thus further impacting current functioning. The link between impact and benefit finding has been found among childhood cancer survivors, and not specifically among caregivers [14], so possibly the impact of a child's illness differentially predicts finding benefits for children and caregivers. Another possible explanation is that past research has utilized varied measures of the impact of the cancer experience (e.g., emotional impact of illness compared to global impact including physical, social, and cognitive impact) [14].

Limitations

One study limitation was the use of a cross-sectional design, which does not allow inferences about the directionality of the associations. For example, psychosocial resources may improve benefit finding as hypothesized, but finding greater benefits in the cancer experience could also influence optimism, positive spiritual coping, and seeking/accepting support. Future research should utilize longitudinal designs to elucidate the directionality of the associations among the variables. Additionally, caregivers were the only informant for this study and therefore shared method variance could contribute to the observed relationships. Despite this limitation, we still found differential prediction of benefit finding, supporting the validity of the findings. There is also the possibility that the relatively small sample size and breadth of variables studied led to increased type I error, and therefore future larger-scale studies should be conducted to replicate the observed relationships. Further, the sample included primarily female caregivers of children with cancer, so the findings may not generalize to male caregivers. Future research should address predictors of benefit finding in different caregivers. The generalizability of the results also may be limited by recruiting families from a cancer survivorship clinic. It could be that families who do not attend such a clinic experience fewer positive outcomes following their child's diagnosis. Recruiting families of cancer survivors outside of a clinic may increase the generalizability of the findings.

Implications and Conclusions

Despite these limitations, this study has several clinical implications. Many interventions for families of children with cancer focus on lowering distress (anxiety, depression) [43]. These aspects of the cancer experience are important to address, but they may not represent the only way to improve caregivers' positive adaptation. Our results point to several factors that may promote benefit finding. Although some factors may not be malleable (e.g., medical

variables), helping caregivers learn to cope more adaptively with their child's diagnosis, especially through strategies that lessen the perceived impact of the illness and promote optimism and positive spiritual coping, may promote finding benefits among families. Cognitive behavioral interventions to work on cognitive restructuring or helping families connect with spiritual support systems may prove beneficial. In fact, coping skills interventions designed to help adult patients cope with stressful situations have been shown to increase perception of benefits [23].

In summary, several factors may be important to the development of benefit finding among caregivers of childhood cancer survivors, including perceived illness impact, optimism, adaptive coping skills, and receiving support from others. Future research should extend these results longitudinally and evaluate interventions targeting these constructs in families of children with cancer.

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Table 1
Descriptive statistics of demographic, medical, and psychosocial variables and correlations with benefit finding

Variable	M/% (range) ^d	SD	Correlation with Benefit Finding
<i>Child Variables</i>			
Age	14.01 (4-27)	5.19	.00
Female	48%	-	-.08
Minority	33%	-	-.04
Diagnosis of leukemia	42%	-	.24 [*]
Diagnosis of BT	16%	-	-.15
Multiple treatment modalities	52%	-	-.25 [*]
Age at diagnosis (years)	5.93 (0-17)	4.76	-.08
Time since treatment (years)	5.71 (1-16)	4.31	.07
Treatment length (months)	19.82 (1-61)	13.60	.07
Treatment intensity	2.55	0.77	-.05
Experienced relapse	13%	-	-.18 [†]
<i>Caregiver Variables</i>			
Age	43.39 (21-61)	8.01	-.02
Female	86%	-	-.01
Minority	25%	-	.01
Rural location	28%	-	-.09
Mother completed college	39%	-	.12
Father completed college	33%	-	.14 [†]
Family annual income	3.83 (<\$20,000->\$100,000)	1.75	.20
Married	80%	-	.03
<i>Psychosocial Variables</i>			
Active coping ^a	2.78	0.55	.22 [*]
Emotion coping ^a	2.46	0.67	.29 [*]
Avoidant coping ^a	1.23	0.32	.00
Acceptance coping ^a	2.79	0.39	.19 [†]
Positive Spiritual Coping ^a	3.34	0.66	.53 [*]
Negative Spiritual Coping ^a	1.33	0.42	-.02
Social support ^a	3.57	0.37	.47 [*]
Optimism ^b	3.85	0.85	.36 [*]
Caregiving burden ^b	1.64	0.52	-.17
Illness impact ^a	1.28	0.39	-.30 [*]
Post-traumatic stress ^b	1.53	0.68	-.16
Benefit finding ^b	4.03	0.79	--

Note.

[†]p<.10;

^{*}p < .05.

ALL=Acute lymphocytic leukemia; BT=brain tumor.

^aScale range 1-4;

^bScale range 1-5;

^cScale range 1-3;

^dRange provided for relevant variables.

Table 2
Intercorrelations among variables retained for multiple regression analyses

Predictor Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<i>Child Variables</i>														
1. Diagnosis: leukemia	1.00													
2. Diagnosis: brain tumor	-.34*	1.00												
3. Multiple treatment modalities	-.79*	.28*	1.00											
4. Experienced relapse	-.26*	.32*	.31*	1.00										
<i>Caregiver Variables</i>														
5. Father completed college	-.08	-.01	.07	-.03	1.00									
6. Family annual income	-.05	-.17	.01	-.04	.43*	1.00								
<i>Psychosocial Variables</i>														
7. Active coping	.14	-.16	-.05	.08	.25*	.29*	1.00							
8. Emotion coping	.14	-.07	-.06	.13	.02	.19†	.46*	1.00						
9. Acceptance coping	.00	-.15	.02	-.04	.02	.14	.51*	.50*	1.00					
10. Positive spiritual coping	.12	-.16	-.11	-.06	.04	.15	.12	.39*	.22*	1.00				
11. Social support	.06	-.14	-.07	-.23*	.26*	.43*	.23*	.17	.23*	.33*	1.00			
12. Optimism	-.03	-.11	-.02	-.04	.11	.22*	.21†	-.10	.11	.14	.43*	1.00		
13. Caregiving burden	-.05	.17	.06	.01	-.10	-.25*	.01	.16	.22*	-.09	-.21†	-.21†	1.00	
14. Illness impact	-.11	.23*	.00	.20†	-.08	-.24*	.08	.07	.19	-.06	-.27*	-.22†	.53*	1.00
15. Post-traumatic Stress	-.13	.31*	.14	.27*	.02	-.17	.01	.18	.20†	.04	-.32*	-.31*	.49*	.57*

Note.

†
 $p < .10$;

*
 $p < .05$.

Table 3
Multiple regressions predicting overall benefit finding

Predictor	Step 1 Adjusted		Fully adjusted	
	β	R^2	β	R^2
Step 1		.11 *		.11 *
Multiple treatments	-.22		-.22	
Experienced relapse	-.11		-.11	
Family annual income	.20		.20	
Step 2				.42 *
Active coping	.21	.04	.09	
Emotion coping	.28 *	.07 *	.13	
Acceptance Coping	.18	.03	.00	
Positive spiritual coping	.49 *	.24 *	.35 *	
Social support	.47 *	.17 *	.19	
Optimism	.37 *	.13 *	.23 *	
Illness Impact	-.27 *	.06 *	-.22 *	

Note.

*
 $p < .05$.

Step 1 adjusted values indicate the beta and R^2 for each predictor variable separately after adjusting for Step 1 variables. Fully adjusted values indicate beta and R^2 for variables after adjusting for Step 1 and including other Step 2 variables in the model.