

Finding the Silver Lining:  
Children and Families' Abilities to Perceive Benefits in the Face of Adversity

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## Table of Contents

Acknowledgements.....	iii
List of Tables.....	iv
Abstract.....	v
Introduction.....	1
Method.....	9
Results.....	15
Discussion.....	20
References.....	27
Appendix A: Child and Family Background Information Form.....	33

## List of Tables

Table 1: Measurement Descriptions.....	12
Table 2: Demographics Table.....	14
Table 3: Correlations Between Benefit Finding and Demographic/Treatment Variables.....	16
Table 4: Descriptive Statistics of Benefit Finding for Each Family Member.....	18

## Abstract

Many individuals faced with chronic illnesses state their experience has led to benefits. Adult research suggests individuals' abilities to perceive gains during times of adversity impacts their health; yet, research into children's perceptions is limited. Accordingly, this study investigated (a) what factors are associated with benefit finding in children, (b) the relationship between benefit finding among family members, and (c) whether children who perceived more benefits during the cancer experience have better psychological and physical well-being than those who perceived fewer benefits. To address these hypotheses, children, caregivers, and their nurses completed measures. Children in this sample most often endorsed changes in life priorities as a benefit regardless of age. Families noted that they felt closer to one another and were more aware of the love and support others offered. No relationships were found between children's benefit finding and their quality of life or the severity of their illness.

## Finding the Silver Lining:

### Children and Families' Abilities to Perceive Benefits in the Face of Adversity

Psychological research and practice have often mirrored the assumptions put forth by the medical discipline by conforming to a pathological model; however, recent research on the topic of traumatic life events and crises has taken a turn toward the more positive aspects of psychology. Specifically, as psychology has investigated the topic of resilience, the field has moved beyond assuming that individuals respond unidimensionally with negative emotions and poor adaptation to crises (Bonanno, 2004; Fredrickson, Tugade, Waugh, & Larkin, 2003). Moreover, several investigators have spent the past few decades determining what kinds of gains victims of trauma perceive and how such perceptions affect their well-being (see Helgeson, Reynolds, & Tomich, 2006, for a meta-analytic review). Overall, the research indicates that the majority of people who experience a negative life event, such as a chronic illness or a plane crash, are able to find gains in the face of adversity (McMillen, Smith, & Fisher, 1997; Park & Helgeson, 2006; Tennen & Affleck, 1999). This ability of people to perceive gains in times of adversity is generally referred to as benefit finding (Affleck & Tennen, 1996).

The terms benefit finding, posttraumatic growth (PTG), benefit reminding, meaning making, and sense making are often used interchangeably throughout the research and may be confused with the concept of resilience; however, they are distinctly different. Resilience refers to an individual's ability to return to their previous level of functioning following a traumatic event; whereas, benefit *finding* and PTG occur when individuals recognize the positive in negative experiences and/or demonstrate improved levels of functioning following a trauma (Bonanno, 2004; Helgeson, Lopez, & Mennella, 2009; Kilmer, 2006; Malchiodi, Steele, & Kuban, 2008). Examples of benefits people commonly cite include positive self changes (e.g.,

increased empathy), changes in life priorities and goals, and the strengthening of interpersonal relationships (e.g., Nolen-Hoeksema & Davis, 2002; Pakenham, Sofronoff, & Samios, 2004; Tedeschi, Park, & Calhoun, 1998; Tennen & Affleck, 2002; Thornton, 2002). Although it is unclear whether benefit finding and PTG represent the same construct, it is possible that they may differ with regard to the severity of the preceding event/trauma and whether the growth is actual or perceived (e.g., Tedeschi et al., 1998). Benefit *reminding* describes the process of deliberately thinking about benefits that have already been perceived, and sense-making entails searching for the cause or reason why a negative event occurred. Although not the same, both benefit reminding and sense making are closely related to benefit finding. Theories regarding personality differences, coping strategies, cognitive adaptation, and emotion can be used to further clarify how benefit finding is distinct.

#### Theoretical Grounding

First, personality and dispositional traits are often associated with benefit finding. The two most common traits related to benefit finding are optimism and hope. Generally speaking, optimists' expectation that good things will happen to them influences the ways in which they approach challenges and cope with difficult situations (Carver & Scheier, 2002). The typical coping strategy of an optimist involves using problem-focused coping when the situation is perceived as manageable and emotion-focused coping when it is not. This strategy is adaptive because it leads the individual to accept reality while simultaneously dealing with the event instead of avoiding or denying it. As with optimism, researchers (e.g., Affleck & Tennen, 1996) have stated that hope is similar to benefit finding in that it promotes active coping.

In addition to being related to personality traits that influence one's coping style, benefit finding has also been conceptualized as a unique style of coping. In particular, some past



researchers (e.g., Taylor, 1983) have described it as a form of emotion-focused coping and thus deemed it maladaptive. More recently, however, theorists have reconsidered the idea of benefit finding as a coping style. For instance, Janoff-Bulman's (1999) theory posited that the coping process entails the shattering and rebuilding of fundamental life assumptions. When people experience traumatic life events, their assumptions are shattered, and they are forced to confront their vulnerability. At this point, the process of rebuilding, or coping, begins. The first stage of coping involves making sense of the trauma by determining how it fits into one's world views, and the second stage involves attempts to understand the value or worth of the loss (Nolen-Hoeksema & Davis, 2002) in a developmentally appropriate way (Kilmer, 2006). In other words, according to Janoff-Bulman (1999), successful coping involves moving from sense making to benefit finding. Similarly, the final stage of Taylor's (1983) theory proposes that coping involves efforts to enhance self-esteem by making downward comparisons, or comparing oneself to people who are less fortunate. Here again, the final phase of the coping process includes benefit finding because the downward comparisons reframe the situation in a positive light and allow people to perceive gains.

Janoff-Bulman and other theorists (see Kilmer, 2006) also suggest that this coping process may be more pliable in children because their assumptions are not firmly developed. Consequently, children who experience a trauma may be more open to various interpretations of the event and rely on their caregivers to determine how to incorporate the traumatic experience into their world view, make meaning of the event, and add value to the event. In other words, children's responses to trauma may be moderated by how their caregivers respond to the trauma (Kilmer, 2006).

Although these theories provide a strong basis for the mechanisms behind growth, Zoellner and Maercker (2006) noted that they rely heavily on cognitive factors and discount the role of emotions in benefit finding. Furthermore, Calhoun and Tedeschi (2006) stated positive emotions should be addressed in future models of growth. According to Fredrickson and Levenson (1998), positive emotions have the ability to calm and counteract negative emotions associated with a traumatic event. Moreover, Fredrickson and Joiner (2002) posited that experiencing positive emotions can lead to an upward spiral of more positive emotions. Similar to the idea of a downward spiral into depression, it is hypothesized that positive emotions improve problem-solving skills, which in turn, foster personal resources, such as social support and intellect, and lead to even more positive emotions and improved well-being. Indeed, investigators have found that positive emotions fully mediated the relationship between pre-crisis resilience and post-crisis psychological resources (i.e., life satisfaction, optimism; Fredrickson et al., 2003). In other words, positive emotions lead to growth following a crisis. Thus, the broaden-and-build theory could imply that another mechanism behind benefit finding is positive emotions and that benefit finding may in turn foster other positive outcomes.

### Empirical Findings

Despite a somewhat confusing theoretical grounding, quite a bit of empirical research has been done on benefit finding. Most of the research has examined different types of situations where benefits are found, the types of benefits people often cite, correlates of benefit finding, and psychological and physical health outcomes influenced by benefit finding.

#### *The Influence of Benefit Finding on Well-being*

Research on the outcomes related to benefit finding has primarily surfaced in the adult literature. For example, Carver and Antoni (2004) examined the long term effects of benefit

finding on early stage breast cancer patients. Results indicated that benefit finding positively influenced well-being within one year of diagnosis and predicted quality of life (QoL) at a 5-8 year follow-up. In particular, women who found benefits had less negative affect and fewer depressive symptoms. Tomich and Helgeson (2004) further elaborated on these findings by noting that the outcomes of benefit finding in women with breast cancer were associated with individual characteristics such that lower socioeconomic status (SES), minority status, and increased disease severity were related to higher levels of benefit finding. Furthermore, Carver and Antoni (2004) found that high levels of benefit finding in women with more severe diagnoses of breast cancer had detrimental effects on their QoL. In particular, benefit finding was associated with more negative affect in these women. In other words, these findings suggested certain individual characteristics and disease variables may influence whether people perceive benefits at all and whether perceiving benefits is beneficial for them.

Several researchers have further examined the outcomes of benefit finding in women with breast cancer by using Cognitive-Behavioral Stress Management (CBSM; e.g., Antoni, Lehman, et al., 2001). Cruess et al. (2000) analyzed the effects of a CBSM intervention on perceived benefits and serum cortisol levels. Using path model analysis, they determined increased benefit finding for the intervention group was related to decreased cortisol levels, indicating better health outcomes. McGregor et al. (2004) elaborated on these findings by suggesting that a CBSM intervention also increased benefit finding in women with breast cancer while simultaneously improving cellular immune functioning. Interestingly, these studies also found that decreases in distress were not necessarily responsible for improved physiological functioning. Instead, it appears that increases in positive perceptions were associated with improved physiological functioning, independent of distress level (Bower & Segerstrom, 2004).

Furthermore, Tedlie- Moskowitz and Epel (2006) determined that benefit finding was related to more adaptive cortisol levels in maternal caregivers only when the caregivers also experienced positive daily emotions suggesting that positive emotions may play a key role in the relationship between benefit finding and adaptive health outcomes.

These and other adult studies indicate that benefit finding is associated with psychological and physical outcomes in adults. Yet, the nature of this relationship remains somewhat convoluted. A meta-analytic review of adult benefit finding indicated benefit finding was related to less depression and more positive well-being regardless of the type of disease or trauma (Helgeson et al., 2006); however, benefit finding was also related to more intrusive and avoidant thoughts about the adverse event. Consequently, findings reveal that individuals may not be less distressed, but they probably have a more positive perception about their self, relationships, and/or life (Calhoun & Tedeschi, 2006). A review by Linley and Joseph (2004) noted several factors may influence the nature of this relationship, including social support, perceived threat, and the severity of the trauma.

#### *Benefit Finding in Parents of Children with Chronic Illnesses*

Although the adult literature on benefit finding and health outcomes is plentiful, there is very little on children. In fact, the first research to include children rarely considered how benefit finding involved the child. Instead, it primarily focused on mothers' abilities to find benefits when their child had an illness and how their benefit finding abilities affected their own health. Two studies concluded that mothers can, in fact, find benefits when they have an ill child (Affleck, Allen, Tennen, McGrade, & Ratzan, 1985; Pakenham et al., 2004). Moreover, Affleck, Tennen, and Gershman (1985) found that for mothers of babies who were recently discharged from the Neonatal Intensive Care Unit (NICU), perceiving benefits was related to more positive

mood and less thought intrusion. In contrast, mothers' inability to perceive benefits predicted lower infant developmental scores on the Bayley Scale. Thus, although a cause for and direction of the relationship cannot be clarified here, benefit finding in the mothers seems to be related to the child's well-being as well as their own.

Overall, the previously discussed research on children and benefit finding has mostly focused on how benefit finding affects the parents and suggested parental benefit finding is often related to better psychological well-being in mothers. Considering the fact that benefit finding can have such a positive impact on individuals with chronic illnesses and parents of individuals with chronic illnesses, one has to wonder how children's own perceptions of benefits might be related to their well-being.

#### *Child and Adolescent Benefit Finding and Growth*

According to a recent review of research on benefit finding and growth in children (Helgeson et al., 2009), 14 studies have been published on this topic (e.g., Cryder, Kilmer, Tedeschi, & Calhoun, 2006; Ickovics, Meade, Kershaw, Milan, & Ethier, 2006). As with the adult literature, several of these studies have focused on cancer populations. For instance, Barakat and colleagues (2006) found that approximately 85% of adolescent cancer survivors endorsed at least one positive perception as a result of having had cancer, with the most commonly reported perception being a change in the way they think about their life. Mattsson, Ringner, Ljungman, and von Essen (2007) used open-ended questions to determine that adolescent cancer survivors report both positive and negative thoughts about the trauma, including improved relationships and greater empathy. In another example, Phipps, Long, and Ogden (2007) recruited children and adolescents diagnosed with cancer to assess the reliability and validity of the Benefit Finding Scale for Children. Their findings indicated that children

endorsed moderate levels of benefits. Children's abilities to perceive benefits appear to be influenced by several individual characteristics, including ethnicity, age, time since diagnosis (Phipps et al., 2007), time since treatment, treatment intensity, and perceived life threat (Barakat et al., 2006). Yet, the direction of influence is often inconsistent across studies. For instance, research has found both positive and negative correlations with age (see Helgeson et al., 2009). Thus, in this instance, it may be more appropriate to evaluate the different types of benefits children of different ages perceive than the *amount* of benefits.

In assessing the relationship between benefit finding and outcomes, Phipps et al. (2007) determined that the perception of benefits was related to increased optimism and self-esteem as well as decreased anxiety; however, no significant relationships were reported between benefit finding and post-traumatic stress (PTSS) or overall health-related QoL. In contrast, adolescents' perceptions of such growth were related to increased PTSS (Barakat et al., 2006; Laufer & Solomon, 2006). This discrepancy between benefit finding and PTSS associations highlights the inconsistent findings that have been published thus far on the relationships between benefit finding and outcomes in children (Helgeson et al., 2009). Consequently, the nascent child literature appears to correspond with adult research on benefit finding in that children may be able to perceive benefits following a traumatic incident, and these benefits can be related to both positive and negative outcomes. Considering the complexity between benefit finding and outcomes in both adults and children, future research addressing which individual characteristics influence children's perception of benefits, how caregivers' perceptions of benefits may relate to their children's, and further examination of the relationship with health outcomes is warranted.

Accordingly, this study continues laying the groundwork for future research and interventions that address potential relationships between children's perceptions of benefits and

their health. The first aim of the study is to describe benefit finding in another sample of children and adolescents. More specifically, descriptive analyses are used to determine whether children perceived benefits, what types of benefits are most commonly cited, and what demographic and disease variables are related to benefit finding. The second aim of the study is to examine the relationship between family members' benefit finding. Although previous research has looked at both child and adult benefit finding separately, few investigators have explored how the perception of benefits may occur in the context of a family system. Parents may play a key role in pointing out benefits that their children can perceive, modeling growth, and providing a supportive environment that makes it easier for children to adjust to traumatic events (Helgeson et al., 2009; Kilmer, 2006). Indeed, Malchiodi et al. (2008) noted that parents who model positive reactions to trauma have more resilient children and a significant body of research suggests that positive parent-child relationships are a key protective factor for children exposed to adversity (Kilmer, 2006). Lastly, the third aim focuses on the relationship between benefit finding and psychological and physical health. More specifically, it was hypothesized that children who cited more benefits and/or have parents who cited more benefits have better QoL and physical well-being than children who cited fewer benefits.

## Method

### *Measures*

The demographic questionnaire was created specifically for this study. The measure includes questions regarding the child's age, race, and gender and illness related questions such as type of cancer, time since diagnosis, and perceived severity of symptoms (see Appendix A). Parents completed this form.

*The Benefit Finding Scale for Children (BFS-C)* measures 7-17 year old children's abilities to find benefits when they are faced with a chronic illness (Phipps et al., 2007). The 10 item assessment uses a 5 point Likert scale ranging from 1 (*not at all*) to 5 (*very much*). Thus, total scores range from 10-50 with higher scores signifying higher levels of benefit finding. The scale begins with the question stem "Having had my illness . . .", and then lists several benefits such as "has helped me become a stronger person". The scale demonstrated good reliability ( $\alpha = .83$ ) and was positively related to optimism, but not pessimism. For this sample, the BFS-C demonstrated an  $\alpha$  of .83. Responses did not differ by age group.

*The Benefit Finding Scale for Adults (BFS-A; Antoni et al., 2001)* is a 17-item scale that measures adults' abilities to perceive benefits when they themselves have cancer. Similar to the BFS-C, the measure begins with a question stem and then lists several potential benefits on a 5 point Likert scale. In this case, the question stem was adapted to refer to the parent's perceptions of benefits resulting from their child's diagnosis instead of their own. This unidimensional scale relates positively to optimism and negatively to distress. The internal reliability of this scale in previously studies was approximately .95, and the test-retest correlations ranged from .75 to .91 over nine months. The alpha for this sample was .91 for mothers and .94 for fathers.

*The Pediatric Quality of Life Inventory – Cancer Module (PedsQL; Varni, Burwinkle, Katz, Meeske, & Dickinson, 2002)* assesses pediatric cancer specific health-related quality of life. The scale is composed of 26 Likert items that encompass eight dimensions: pain and hurt, nausea, procedural anxiety, treatment anxiety, worry, cognitive problems, perceived physical appearance, and communication. The scale asks children and parents to indicate how much of a problem each item has been within the last month. For instance, parents are asked to indicate whether their child has had problems with aches in their joints or muscles or problems with



becoming anxious when going to see the doctor. Higher scores indicate lower QoL. The scale is related to general quality of life as well as multidimensional fatigue. Furthermore, it has demonstrated average internal consistency coefficients of .72 for child-report and .87 for parent-report forms. The child-reported alphas for this sample were all greater than .71, with the exception of the physical appearance subscale ( $\alpha = .46$ ). Thus, the physical appearance scale was not included in any analyses. The parent-reported alphas were greater than .79.

The *Severity of Illness Scale* (SOIS) is a 6 item questionnaire that assesses the severity of a child's cancer from the perspective of medical personnel (Young-Saleme & Prevatt, 2001). Physicians or nurses rate children on a 7 point Likert scale with regards to the child's degree of impairment, need for further medical services, prognosis, and participation in daily activities. Higher scores indicate greater illness severity. The scale can be used with children between the ages of 4 and 19. The scale has adequate internal consistency for both physicians ( $\alpha = .79$ ) and nurses ( $\alpha = .80$ ); however, there are some discrepancies based on who completes the measure. In particular, nurses tend to rate children's illnesses as slightly more severe than doctors. Therefore, researchers suggest choosing a consistent source when using this measure. For the purpose of this study, only nurses were asked to rate their patients current illness severity. Nurses were chosen because they likely had more frequent contact with the patients over a longer period of time. The SOIS also has good test-retest reliability ( $r = .89-.96$  over a 3 month period) for children who have been diagnosed with various types of cancer (i.e., leukemia) three months to eight years prior to the administration of the measure. Furthermore, the scale has demonstrated reasonable concurrent validity by recognizing increased severity in patients who have just undergone bone marrow transplants or suffered a relapse. The alpha for this sample was considerably lower than that found in previous studies ( $\alpha = .43$ ).

The *Children's Social Desirability Questionnaire* (CSD; Crandall, Crandall, & Katkovsky, 1965) uses a yes/no format to determine whether a child is answering questions in a way that suggests he or she is trying to make a good impression on the researcher. The original 25 item scale was reduced to seven items to avoid overburdening participants. All 25 items on the original scale appeared to have comparable face validity. Therefore, the items chosen were based on the item-to-total correlations from a previous cancer study. The internal consistency coefficient for all the items in the previous sample was .84, and the alpha for the short version was .75. In this sample, the alpha was .68.

Table 1

## Measurement Descriptions

Measures		Mean	SD
Benefit Finding Scale for Children		36.28	8.00
Benefit Finding Scale for Adults			
	Mother	64.71	12.36
	Father	57.59	14.61
PedsQL Total Score			
	Mother	26.48	19.31
	Child	25.05	17.48
Severity of Illness Scale		12.49	3.30
Children's Social Desirability Questionnaire		2.58	1.84

*Settings*

Upon receiving approval by the University of Kansas Institutional Review Board and those of each hospital, data were collected at eight sites: Children's Hospital of Minnesota in

Minneapolis (22.2% of the sample), Children's Hospital Central California in Madera (17.5%), Oklahoma Health Sciences Center in Oklahoma City (17.5%), Cleveland Clinic Children's Hospital in Ohio (14.3%), Children's Mercy Hospital in Kansas City (6.4%), We Care Foundation (6.4%), Children's National Medical Center in Washington DC (4.8%), and the University of Mississippi Medical Center in Jacksonville (4.8%).

### *Design and Procedure*

Although there was some variability in the recruitment and consent process based on hospital policies, the basic procedures proceeded as outlined here. The research contact at each hospital compiled a list of all of the patients who fit the eligibility criteria for this study. Eligibility criteria included children between the ages of 7 and 17 who were at least one year post diagnosis of leukemia. They then mailed a letter written by the principal investigator directly from the hospital to each of these patients and their families. The letter described the purpose of the study and asked families if they were interested in learning more about the project. If family members were interested, they were asked to return a response card to the principal investigator. A packet of questionnaires that included a hospital-specific consent form and all of the study measures was then mailed. Once the questionnaires were received, the hospital was also contacted so that a nurse could be asked to complete a SOIS on behalf of the child.

Each packet contained two copies of a consent form, an assent paragraph for the child, and questionnaires for the mother, father, and child. The mother was asked to complete the demographics form, BFS-A, and PedsQL. The father was also asked to complete the BFS-A, and the child was asked to complete the BFS-C, PedsQL, and CSD. Up to two reminder calls were made in order to increase the likelihood that families would return the questionnaires.

### *Participants*

Children between 7 and 17 years of age and their caregivers were recruited. Approximately 430 eligible families were mailed letters informing them about the study. Of the 102 (24%) families who responded to the letter indicating an interest in participating, 63 ultimately completed the questionnaire packet. Analyses conducted in G\*Power 3.1 indicated that with a sample size of 63, there was a 36% chance of finding a small effect size, a 70% chance of finding a medium effect size, and a 99% chance of finding a large effect size when alpha was set at .05 (Faul, Erdfelder, Lang, & Buchner, 2007). Helgeson et al. (2006) reported that many of the relationships between benefit finding and individual characteristics or outcomes in adults demonstrated a small effect size suggesting that the sample size presented here is a significant limitation of the study. Of the participants, 60.3% of the children were male, and 77.8% were Caucasian (see Table 1). The majority of the children had a diagnosis of Acute Lymphoblastic Leukemia (ALL; 90.5%). Time since diagnosis ranged from 1 to 11 years, and 6.8% of the sample had experienced a relapse.

Table 2

#### Demographic Variables

Child Demographic	N (%)	Mean (SD)
Age	63 (100%)	11.05 (2.72)
Gender		
Male	38 (60.3)	
Female	25 (39.7)	
Race		
Caucasian	49(77.8)	
Hispanic	5 (7.9)	
African-American	4 (6.3)	
Native American	2 (3.2)	
Other	2 (3.2)	

	Asian or Pacific Islander	1 (1.6)	
Cancer Diagnosis			
	ALL	57 (90.5)	
	AML	5 (7.9)	
	Mixed Diagnosis	1 (1.6)	
Time Since Diagnosis		62	4.24 (2.37)
On Treatment		21 (35.6)	
Relapsed		4 (6.8)	

With regard to caregivers, 62 mothers responded as primary caregivers, and 52 fathers completed the other caregiver measures. Approximately 89% of the mothers indicated that they were in a relationship, 4.8% reported they were divorced, and 6.3% indicated they were single. Measures completed by other family members, such as grandparents, were not included in the analyses. Approximately half of the sample reported an annual income above \$75,000, with the median income being between \$75,001 and 100,000. Slightly more than half of mothers had attended college or graduate school, and half of the fathers had completed some college.

## Results

### *Descriptive Analyses*

*Child Benefit Finding.* The first aim of the study is to describe benefit finding in a pediatric sample. In this sample, 98.4% of the children endorsed at least one benefit related to their cancer experience. The average score on the BFS-C for this sample was 36.28 ( $SD = 7.98$ ) and ranged from 12 to 50, indicating that these children had a moderate level of benefit finding (Phipps et al., 2007). The most commonly reported benefits perceived following the cancer experience were helping the child become a stronger person and teaching him/her what is important in life. Although the item focusing on making new best friends was endorsed by 70.5% of the sample, it was endorsed less frequently than any other item.

Correlations were used to analyze potential relationships between children's benefit finding and demographic and disease related variables. A significance value of less than .001 was set a priori to control for Type I error in all analyses. Demographic variables including, age and parent income, were not significantly related to child benefit finding (see Table 2). The time since diagnosis, occurrence of relapse, and child's current participation in treatment were also unrelated to benefit finding as were children's scores on the social desirability questionnaire. There were, however, trends towards girls endorsing a greater number of benefits than boys,  $r(61) = .28, p = .027$ , minority fathers endorsing more benefits,  $r(58) = -.32, p = .02$ , and mothers endorsing more benefits when their children's cancer diagnosis was not Acute Lymphocytic Leukemia (ALL),  $r(62) = -.31, p = .01$ .

Table 3

## Correlations between Benefit Finding and Demographic/Treatment Variables

Child and Family Characteristics	Child BF	Mother BF	Father BF
Age	-.069 (.60)	-.002 (.99)	-.204 (.12)
Gender	-.282 (.03)	-.049 (.71)	-.020 (.88)
Race	-.207 (.11)	-.180 (.16)	-.317 (.02)
Primary Caregiver Education	-.038 (.77)	.053 (.68)	-.136 (.31)
Socioeconomic Status	-.059 (.66)	.202 (.12)	-.060 (.66)
Cancer Diagnosis	-.072 (.58)	-.310 (.01)	.033 (.80)
Time Since Diagnosis	-.252 (.05)	-.082 (.53)	-.022 (.87)
On Treatment	.158 (.24)	.122 (.36)	.155 (.40)
Relapsed	.002 (.99)	.062 (.64)	.021 (.88)
Social Desirability	.246 (.06)	.267 (.04)	.025 (.86)

*Note:* Pearson's correlations were conducted. The significance value of the correlation is listed in the parentheses. Males, Caucasians, Acute Lymphocytic Leukemia, and on treatment were coded as 1. Accordingly, positive correlations would indicate a relationship between these variables and greater benefit finding.

*Familial Benefit Finding.* The second aim of the study is to determine whether family members endorsed benefits in a similar fashion. Prior to making these comparisons, the items on the adult and child benefit finding scale were matched based on similarity. Nine of the items on the child and adult benefit finding scales were similar. A Likert response of one on both the child and adult benefit finding scales indicated that an item was not a benefit for that individual; whereas, responses between 2 and 5 indicated how strongly an individual endorsed a given benefit. A significance value of less than .001 was set a priori to control for Type I error in all analyses.

When participants indicated whether or not an item on the benefit finding scale was indeed a benefit of the cancer experience for them, more children (29.5%), mothers (15.9%), and fathers (44.1%) reported that “making new friends” was *not* a benefit of the cancer experience than for any other benefit listed. Moreover, those participants who did indicate “making new friends” was a benefit specified that it was only a little bit of a benefit, suggesting this area had the lowest amount of growth for each type of family member (see Table 3; Child’s  $M = 2.92$ ; Mother’s  $M = 2.97$ ; Father’s  $M = 1.97$ ). A repeated measure ANOVA was conducted to further determine whether individuals within a single family unit responded similarly. Results indicate that individuals within a given family unit responded in significantly different ways when asked about making new friends,  $F(2,114) = 13.22, p < .001$ ; however, sphericity was violated in this analysis. Paired samples t-tests further clarified that fathers reported significantly less benefit in this area than both their children,  $t(57) = -4.07, p < .001$ , and spouses,  $t(58) = 5.50, p < .001$ .

Table 4

## Descriptive Statistics of Benefit Finding for Each Family Member

Benefit		% Who Endorsed Item as a Benefit	Strength of Agreement <i>M (SD)</i>
Family closer together	Mother	96.8	3.83 (1.14)
	Father	96.6	3.93 (1.02)
	Child	91.7	3.78 (1.38)
All people need to be loved	Mother	87.3	3.78 (1.36)
	Father	89.7	3.40 (1.31)
	Child	93.4	3.70 (1.16)
More aware of love and support	Mother	98.4	4.32 (0.99)
	Father	96.6	3.98 (1.14)
	Child	96.7	4.39 (1.04)
Deal better with problems	Mother	90.2	3.49 (1.27)
	Father	91.5	3.07 (1.11)
	Child	90.2	3.38 (1.25)
Make new best friends	Mother	84.1	2.97 (1.24)
	Father	55.9	1.97 (1.11)
	Child	70.5	2.92 (1.57)
Realize who my real friends are	Mother	90.3	3.90 (1.33)
	Father	89.7	3.50 (1.38)
	Child	78.7	3.05 (1.47)
Change in life priorities	Mother	88.7	4.11 (0.99)
	Father	91.5	3.63 (1.19)
	Child	98.3	3.93 (1.10)
Become a stronger person	Mother	87.1	4.21 (1.06)
	Father	94.9	3.54 (1.24)
	Child	98.4	3.93 (1.15)
Taught me to be patient	Mother	95.2	3.68 (1.22)
	Father	94.9	3.31 (1.16)
	Child	83.6	3.10 (1.39)



In contrast to low levels of benefit finding, children, mothers, and fathers noted that an “increased awareness of how much each family member is loved and supported” was quite a bit of a benefit (Child’s  $M = 4.39$ ; Mother’s  $M = 4.32$ ; Father’s  $M = 3.98$ ). In other words, each family member independently reported that the highest amount of benefit they experienced following the cancer experience was in the domain of love and support. Although father’s strength of agreement with this item trended toward being significantly lower than their child and spouse’s reports, ( $F(2,112) = 5.22, p = .007$ ; Mother-Father  $t(57) = 2.92, p = .005$ ; Child-Father  $t(57) = -2.57, p = .013$ ), repeated measures ANOVAs indicated that families did respond similarly to other interpersonal benefits. For instance, there were no significant differences in the way members within a single family unit responded to the benefit about all people needing to be loved,  $F(2,112) = 1.90, ns$ , or the feeling that the cancer experience brought their family closer together,  $F(2,11) = .29, ns$ . Indeed, correlations determined that there were significant relationships between the various dyads that make up a family on the benefit regarding bringing the “family closer together” (Mother-Father dyad  $r = .488, p < .001$ ; Mother-Child dyad  $r = .440, p < .001$ ; Father-child dyad  $r = .564, p < .001$ ). For instance, when children reported large amounts of growth in family closeness, so did mothers. Thus, there appears to be some similarity in the manner in which family members positively endorse benefits related to love and feelings of closeness. It is important to note that the interpretation of the non-significant findings presented here should be interpreted with caution because there may be small differences in the way a family responds to a particular benefit that would only come to light with a greater sample size.

### *Primary Analyses*

The final aim of this study was to determine whether children's abilities to perceive gains during the cancer experience influenced their psychological and physical well-being. This aim was broken down into two parts for QoL and severity of illness. An a priori significance level of .001 was set in order to control for Type I error.

*Quality of Life.* Correlations between child-reported benefit finding and child-reported total QoL,  $r(57) = .033, p = .81$ , as well as mother-reported benefit finding and mother-reported total QoL,  $r(57) = .038, p = .776$ , were not significant. Consequently, the relationship between benefit finding and each QoL subscale was also examined.

The mother and child QoL subscales did not meet the assumption of normality. As a result, these values were transformed into dichotomous variables representing children who did or did not have symptoms. Logistic regressions were then conducted in place of the proposed linear regressions. Findings indicated that neither the child's nor the mother's benefit finding was significantly related to any of the QoL subscales.

*Severity of Illness.* No demographic or disease related variables were significantly related to nurse-reported severity of illness. Accordingly, Pearson correlations were used to evaluate the potential relationship between each family member's benefit finding and the child's illness severity. Neither the child's,  $r(49) = .063, p = .66$ , mother's  $r(51) = .252, p = .07$ , nor father's  $r(46) = .252, p = .77$ , benefit finding were significantly related to illness severity.

### Discussion

In the last few years, some researchers and clinicians (e.g., Barakat et al., 2006; Phipps et al., 2007) have moved beyond considering whether children can just recover from a trauma to whether they can grow from it. This study further corroborates evidence that suggests children

and adolescents between the age of 7 and 17 can indeed perceive benefits following the cancer experience. The most commonly reported benefits included believing that the cancer experience had helped them become a stronger person and recognizing what is important in life. This change in life priorities was also the most commonly reported benefit in several other studies regardless of whether the children were responding to open-ended questions or completing self-report measures (i.e., Ickovics et al., 2006; Milam, Ritt-Olson, Tan, Unger, & Nezami 2005; Salter & Stallard, 2004). Mattsson and colleagues (2007) found that adolescents described their change to a more positive life view as focusing on one day at a time and perceiving daily problems as small in comparison to the possibility of death.

With regard to overall child benefit finding, there was a trend toward girls in this sample endorsing higher levels of benefit finding than boys. Currier, Hermes, and Phipps (2009) also found that children's benefit finding varied as a function of gender; the meta-analysis by Helgeson et al. (2006) on adult benefit finding determined that the effect size for gender, with women perceiving greater benefits than men, was significant. Interestingly, none of these studies offers a potential explanation for gender differences other than methodological limitations in the adult literature due to a strong focus on women-only populations (i.e., breast cancer). Given that gender is beginning to present itself as a significant demographic variable regardless of age and sample, it may be important for future studies to examine why this is the case. It is possible that gender difference in coping skills, particularly those related to processing events by talking to close friends and loved ones, may explain this difference.

Although the existing literature on benefit finding in children is beginning to flourish, previous investigators have yet to look at benefit finding within a family systems model. "Families" in the present study were defined by the participants themselves and included a

combination of intact, divorced, and separated families. Despite these limitations, a pattern of how families as a whole perceive benefits came to light. Specifically, families agreed that acknowledging everyone's need for love, an increased awareness of existing love and support, and bringing their family closer together were benefits of having a child diagnosed with cancer. A diagnosis of childhood cancer often appears to draw an immediate response of increased social support and may be distinct from other diagnoses (e.g., diabetes) and traumas in that way. Yet, these findings are consistent with the Fredrickson et al.'s (2003) study that found that the most common positive emotions following a crisis were love, specifically drawing loved ones closer together, and gratitude for being alive and loved ones being alive. Interestingly, these benefits differ from those reported just by parents of ill children or just by children who have experienced a trauma because reports of benefit finding, when provided independently, tend to endorse a positive change in life priorities (e.g., Affleck et al., 1985; Barakat et al., 2006). Consequently, viewing child benefit finding within a family systems model is a significant strength of this study and will likely prove very insightful for future research.

Parents and children in this sample also reported that making new friends was less often a positive outcome of having a child with cancer than other benefits. However, there was more variability in the way single family units responded to items related to friendship than other benefits focused on interpersonal relationships. The majority of existing research on friendship formation among children with cancer has primarily focused on children's friendships in the school and community (see Fuemmeler, Mullins, & Carpentier, 2006). Thus, little is known about how peers interact within the hospital context. Yet, it is possible that being within the hospital environment limits the types of friendships that can be formed. For instance, families may report intense, fleeting friendships while their children are undergoing similar treatments

because they are connected over the cancer experience. However, the friendships may cease to exist outside of the hospital context because the families have not identified other areas of similar interests that may keep them connected. Furthermore, children and parents may be reluctant to befriend others within the hospital because it may be more burdensome than helpful to hear about other children's prognoses, treatment, etc. In other words, as families become closer during this experience and more cognizant of the already existing social support in their lives, they may rely more heavily on those existing support systems in order to avoid draining emotional resources required to develop ongoing, new friendships.

In order to continue addressing the question of whether benefit finding is adaptive, this study also explored the relationship between benefit finding and well-being. Children's benefit finding was not related to their quality of life. It is possible that the high levels of benefit finding and quality of life reported in this sample did not allow for enough statistical variance to recognize differences. However, this finding is consistent with Helgeson and colleagues' (2006) meta-analysis on benefit finding which found no significant relationship between benefit finding and quality of life across seven adult studies. Park and Helgeson (2006) noted that benefit finding does not appear to be related to many global measures of distress. Thus, quality of life may be too broad of a concept to correlate with benefit finding, especially because it encompasses both mental and physical health issues which may have unique relationships with benefit finding that vary over time. Nurse rated severity of illness was also unrelated to benefit finding in this sample. Identifying nurses who could report on children who were up to 11 years post diagnosis was a challenge, and many of the reporters raised questions suggesting that the measure may have been unclear to them. These difficulties may have contributed to the poor reliability of the SOIS and made it unlikely that a relationship would be found. Furthermore, the

relationship between benefit finding and severity of illness has been somewhat incongruent across previous studies (see Linley & Joseph, 2004). As with traumatic stress (Briere & Elliott, 2000), it is possible that the subjective experience of the event (e.g., helplessness, controllability, life threat) may be more important than the actual severity of the event as rated by health professionals. Consequently, the identity of the rater may impact the relationship between benefit finding and illness severity (see Park & Helgeson, 2006).

Several methodological challenges limit the interpretation of this study. First, the sample reported high SES and parent education levels. Although some research suggests that Acute Lymphocytic Leukemia (ALL) may present more in higher SES families (see Borugian et al., 2005), it is also likely that some self-selection of participants took place in the mail-in response method utilized in this study. A larger sample size would have also further clarified the results by bringing to light smaller effects that may not have been found in this study. Institutional Review Board restrictions, lengthy informed consent processes, and competing research projects at various sites limited recruitment and participation in this study. Consequently, the results should be interpreted with caution to generalization.

Second, using a single method of assessing benefit finding presents concerns. Adult research has concluded that the manner in which benefit finding is assessed impacts the results (Helgeson et al., 2009). Accordingly, it is recommended that studies include a combination of open-ended and closed-ended questions as well as ensuring that children are being asked about both the positive and negative aspects of the traumatic event. Currier and colleagues (2009) recently published an updated version of the Benefit Finding Scale for Children used in this study that simultaneously addresses the benefit and burdens of the cancer experience. Using such a scale in future research will likely elucidate the co-occurrence of distress and growth and

provide further insight into the mechanisms behind growth by assessing whether children are engaging in productive rumination. Helgeson and colleagues (2009) also noted that asking open-ended questions may draw out developmental differences by acknowledging differences between “perks” and benefits. Specifically, they suggest that younger children may report perks, such as missing school and getting new toys, when being asked what good came out of the cancer experience. Kilmer (2006) noted that it is appropriate for children to respond to trauma in a manner consistent with their developmental level, but perks likely differ from benefit finding and relate differently to outcomes. Interestingly, this study found that children of all ages responded similarly to the questionnaire that was used. Thus, prompting with the measurement method and considerations for familial patterns may mean that younger children can at least recognize more cognitively complex aspects of the trauma. It is also possible, however, that parents of younger children in the sample unintentionally influenced their child’s response if they helped them complete the questionnaires although they were instructed not to.

Although the literature on benefit finding and growth has flourished in the last decade, many questions still remain, especially within the realm of children and families. With the help of meta-analyses and reviews, such as those by Helgeson et al. (2006) and Linley and Joseph (2004), the research literature is slowly coming to a consensus regarding what characteristics may contribute to increased perceptions of benefits and what outcomes may be related to benefit finding. Clarifying how PTG/benefit finding is conceptualized, defined, and its nomenclature will help future research to be more replicable and clinically relevant. In particular, systems theories need to be better incorporated into models of how growth occurs, especially when considering children’s benefit finding. As noted in this study, family members within a single family unit tend to respond similarly to questions regarding interpersonal benefits that focus on

the family relationship. Furthermore, when family members responded differently, fathers tended to report that a particular benefit had less of an impact on them than it did on their other family members. These results suggest that certain variables within the family context may influence children's benefit finding. Kilmer (2006) adapted an adult model of growth to begin addressing these systems-related theoretical gaps by considering how caregivers' responsiveness to trauma and environmental support for emotional expression may interact with children's individual characteristics and environment to promote or hinder growth. Lastly, future theories also need to consider the role of positive emotions in benefit finding to clarify potential confusion between benefit finding and other positive emotions as well as how these relate to resilience. Although Kilmer's 2006 model provides a strong basis for interpreting posttraumatic growth in children, research on children's positive responses to growth continues to lack a cohesive theoretical model that incorporates developmental considerations, the context within which children respond to growth, and the role of emotions. Furthermore, research that has begun to explore these various factors continues to be limited.

This is the first study that moves beyond looking at benefit finding within an individual and begins to provide evidence for the inclusion of family systems factors in a comprehensive child growth model. Interestingly, the present study also suggests that the role of positive emotions, such as love, should be investigated when researching the impact of interpersonal relationships on the development of benefit finding. It seems to follow that children's abilities to overcome and possibly grow from adversity would be evolutionarily adaptive, and accordingly, that their caregivers would be the most likely candidates to help them learn to manage distress and perceive benefits through the provision of love and support.



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Appendix A

Child and Family Background Information Form

### Child and Family Background Information

Participant Number: \_\_\_\_\_ Today's Date: \_\_\_/\_\_\_/\_\_\_\_\_

Date of Diagnosis: \_\_\_/\_\_\_/\_\_\_\_\_ Child's Birthday: \_\_\_/\_\_\_/\_\_\_\_\_

What is your relationship to the child?

- Mother  Father  
 Grandparent  Other \_\_\_\_\_

What is the highest level of education you have completed?

- Less than high school  High school diploma or GED  
 Some college  2 year college or vocational school  
 4 year college  Graduate or professional school

What is the highest level of education your partner has completed?

- Less than high school  High school diploma or GED  
 Some college  2 year college or vocational school  
 4 year college  Graduate or professional school

Family's Annual Income:

- Less than \$25,000  \$75,001 to \$100,000  
 \$25,001 to \$50,000  Greater than \$100,000  
 \$50,001 to \$75,000

Child's Gender:

- Male  Female

Child's Race:

- Caucasian  Hispanic  
 African-American  Native American  
 Asian or Pacific Islander  Other

At which hospital is your child receiving treatment?

- University of Mississippi Medical Center  Children's Mercy Hospital, MO  
 University of Oklahoma Health Sciences Center  Children's Hospital of Minnesota  
 Children's National Medical Center, D.C.  Cleveland Clinic Children's Hospital  
 Children's Hospital Central California

Child's Cancer Diagnosis (to the best of your knowledge):

- Acute Lymphocytic Leukemia (ALL)  Acute Myelogenous Leukemia (AML)  
     o Early Pre-B o M0 o M1  
     o Pre-B o M2 o M3  
     o B Cell o M4 o M5  
     o T Cell o M6 o M7  
 Juvenile Myelomonocytic Leukemia (JMML)  Chronic Myelogenous Leukemia (CML)

CONTINUES ON OTHER SIDE



Additional diagnoses:

- Physical illness (e.g., asthma, diabetes) \_\_\_\_\_
- Mental health diagnoses (e.g., L.D., adjustment disorder) \_\_\_\_\_

When was your child first diagnosed with cancer? \_\_\_\_\_

Has your child ever suffered a relapse? Yes No

If so, when? \_\_\_\_\_

What type of treatment (if any) is your child *currently* receiving?

- Chemotherapy
- Radiation
- None
- Bone marrow transplant
- Other \_\_\_\_\_

Has your child received a bone marrow transplant in the *past*? Yes No

If so, when? \_\_\_\_\_

How long ago was your child's most recent cancer-related doctor's appointment?

- In the last week
- A month ago
- Six months ago
- Over a year ago
- Two weeks ago
- Three months ago
- A year ago

How frequently does your child go to the hospital for cancer-related appointments?

- Once a week
- Once a month
- Twice a year
- Less than once a year
- Twice a month
- Once every 3-4 months
- Once a year

How severe do you think your child's illness is right now?

1 Not Severe	2 Slightly Severe	3 Moderately Severe	4 Very Severe	5 Extremely Severe
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How would you describe your family's level of religiosity/spirituality?

1 Extremely Low	2 Low	3 Moderate	4 High	5 Very High
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Please use the space below if there is anything we didn't ask about that you might like to comment on or any additional info you would like to share with us.

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