

Grief and Growth in Bereaved Siblings: Interactions Between Different Sources of Social Support

Katianne M. Howard Sharp
Nationwide Children's Hospital, Columbus, Ohio,
and The Ohio State University

Claire Russell and Madelaine Keim
Nationwide Children's Hospital, Columbus, Ohio

Maru Barrera
Hospital for Sick Children, Toronto, Ontario, Canada

Mary Jo Gilmer, Terrah Foster Akard,
and Bruce E. Compas
Vanderbilt University

Diane L. Fairclough
Colorado School of Public Health

Betty Davies
University of Victoria

Nancy Hogan
Loyola University Chicago

Tammi Young-Saleme
Nationwide Children's Hospital, Columbus, Ohio

Kathryn Vannatta and Cynthia A. Gerhardt
Nationwide Children's Hospital, Columbus, Ohio, and The Ohio State University

The objective was to characterize the relation between different sources of school-based social support (friends, peers, and teachers) and bereaved siblings' grief and grief-related growth and to examine whether nonparental sources of social support buffer the effects of low parent support on bereaved siblings. Families ($N = 85$) were recruited from cancer registries at 3 pediatric institutions 3–12 months after a child's death. Bereaved siblings were 8–18 years old ($M = 12.39$, $SD = 2.65$) and majority female (58%) and White (74%). During home visits, siblings reported their perceptions of social support from parental and nonparental sources using the Social Support Scale for Children, as well as grief and grief-related growth using the Hogan Sibling Inventory of Bereavement. Parent, friend, and teacher support were positively correlated with grief-related growth, whereas parent and peer support were negatively correlated with grief for adolescents. Teacher and friend support significantly moderated the association between parent support and grief such that teacher and friend support accentuated the positive effects of parent support. Friend and peer support moderated associations between parent support and grief/growth for adolescents but not children. School-based social support, namely from friends, peers, and teachers, appears to facilitate the adjustment of bereaved siblings. Findings suggest that bereaved siblings may benefit from enhanced support from

Katianne M. Howard Sharp, The Research Institute, Nationwide Children's Hospital, Columbus, Ohio, and Department of Pediatrics, The Ohio State University; Claire Russell, Department of Psychiatry and Behavioral Health, Nationwide Children's Hospital; Madelaine Keim, The Research Institute, Nationwide Children's Hospital; Maru Barrera, Department of Psychology, Hospital for Sick Children, Toronto, Ontario, Canada; Mary Jo Gilmer, Department of Nursing, Vanderbilt University; Terrah Foster Akard, School of Nursing, Vanderbilt University; Bruce E. Compas, Department of Psychology and Human Development, Vanderbilt University; Diane L. Fairclough, Department of Biostatistics and Informatics, Colorado School of Public Health; Betty Davies, School of Nursing, University of Victoria; Nancy Hogan, Marcella Niehoff School of Nursing, Loyola University Chicago; Tammi Young-Saleme, Department of Psychiatry and Behavioral Health, Nationwide Children's Hospital; Kathryn Vannatta and Cynthia A. Gerhardt, The Research Institute, Nationwide Children's Hospital,

and Department of Pediatrics and Psychology, The Ohio State University.

Katianne M. Howard Sharp is now at the Psychology Department, St. Jude Children's Research Hospital, Memphis, Tennessee.

This research was supported by grants from the National Institutes of Health (R01 CA98217), the Research Institute at Nationwide Children's Hospital, and Cincinnati Children's Hospital Medical Center. Portions of this work were presented at the Society of Pediatric Psychology Annual Conference, Portland, Oregon, 2017, and the Society of Pediatric Psychology Annual Conference, San Diego, California, 2015. We thank the families who generously participated in this work.

Correspondence concerning this article should be addressed to Cynthia A. Gerhardt, The Research Institute, Nationwide Children's Hospital, Center for Biobehavioral Health, Room FB3135, 700 Children's Drive, Columbus, OH 43205-2696. E-mail: Cynthia.Gerhardt@nationwidechildrens.org

teachers and friends regardless of age, with middle/high school students particularly benefitting from increased support from close friends and peers.

Impact and Implications

This study suggests that school-based social support may enhance the positive effect of parental support for bereaved siblings and, in the case of peer support, compensate for low parental support. Thus, bereaved siblings may benefit from social support from teachers and close friends across ages, with adolescents in middle/high school particularly benefitting from social support from peers and close friends.

Keywords: grief, growth, social support, children/adolescents, bereavement

The death of a child is one of the most stressful experiences a family can endure. Surviving siblings are uniquely affected due to the nature and depth of the sibling relationship (Forward & Garlie, 2003; Herberman Mash, Fullerton, & Ursano, 2013). Siblings have a history of shared experiences, intertwined development, and an attachment expected to span a lifetime (Packman, Horsley, Davies, & Kramer, 2006). Furthermore, bereaved siblings must cope with not only the death of their brother or sister, but also their parents' grief and emotional unavailability or parenting changes (e.g., Lehman, Lang, Wortman, & Sorenson, 1989; Martinson & Campos, 1991). However, limited empirical research has examined the adjustment of bereaved siblings, particularly the potential benefits of social support from school-based sources, such as friends, peers, and teachers. Understanding the benefits of school-based social support may provide school psychologists with insight about how to best support bereaved siblings.

Bereaved siblings describe a range of emotional reactions after the death, including shock, loneliness, guilt, fear, and numbness (Balk, 1983; Davies, 1991; Nolbris & Hellström, 2005). Although grief is a normal aspect of bereavement, it can also manifest in atypical symptoms, such as despair, helplessness, hopelessness, and detachment (Hogan, Greenfield, & Schmidt, 2001). Moreover, grief reactions increase siblings' risk for other problems, such as depression, anxiety, substance use, decreased social participation, and declines in school performance (Balk, 1983; Foster et al., 2012; Nolbris & Hellström, 2005; Rosenberg et al., 2015). However, bereaved siblings also experience grief-related growth. Similar to posttraumatic growth, grief-related growth consists of positive change or personal growth resulting from a grief experience (Hogan & Schmidt, 2002). For example, bereaved siblings report increased maturity and compassion (Balk, 1983; Foster et al., 2012; Martinson & Campos, 1991), improved relationships with family members and peers, and positive changes in life priorities and future plans (e.g., Foster et al., 2012). Given these findings, it is important to identify factors that reduce grief and facilitate grief-related growth.

According to the stress-buffering hypothesis, social support may mitigate the negative effects of stressful life events by influencing children's coping and appraisal of the stressor (Cohen & Wills, 1985). Indeed, social support has been identified by bereaved siblings as a key resource (e.g., Nolbris & Hellström, 2005; Thompson et al., 2011), with associations between social support and reduced grief over time (Sveen, Eilegård, Steineck, & Kreicbergs, 2014). Social support is also a critical process for facili-

tating growth following traumatic experiences (Tedeschi & Calhoun, 2004). Specifically, research with parentally bereaved children has found positive associations between social support and grief-related growth (Wolchik, Cox, Tein, Sandler, & Ayers, 2009). Social support may come from family, friends, and school/teachers after the death of a brother or sister (Nolbris & Hellström, 2005; Thompson et al., 2011). However, limited research has empirically examined the effects of social support from parental and nonparental sources. In the broader developmental literature, different sources of social support display different patterns of correlates (Cauce, Hannan, & Sargeant, 1992; Rueger, Malecki, & Demaray, 2008); thus, support from parents, teachers, peers, and close friends may vary in relation to grief and grief-related growth.

Bereaved parents may be limited in their ability to provide emotional support due to their own grief and distress (Lehman et al., 1989; Martinson & Campos, 1991), with bereaved parents reporting less availability, attention, and support for surviving siblings (e.g., Martinson & Campos, 1991); increased distance from surviving siblings (Lehman et al., 1989); and poorer family communication (e.g., Balk, 1991). Although some siblings have reported improved communication and stronger family relationships (Foster et al., 2012; Martinson & Campos, 1991), others have reported reluctance to discuss the death with grieving parents (Forward & Garlie, 2003; Martinson & Campos, 1991). Among families in which children die from extended illnesses, such as cancer, psychosocial risk may be even greater given that they are often characterized as having fewer resources and devoting less attention to healthy siblings even before the death (e.g., Wilkins & Woodgate, 2005). Thus, bereaved siblings whose brother or sister died from such an extended illness may experience chronic, low parental social support. Indeed, nonbereaved siblings of children with cancer who report poorer family functioning and more impaired parenting experience more distress (Long, Marsland, & Alderfer, 2013). Thus, decreased support from parents may increase risk for emotional and behavioral problems in bereaved siblings. Specifically, bereaved siblings noted that tension and arguing with parents contributed to greater distress (Hogan, DeSantis, Demi, Cowles, & Ross, 1994), with an increased risk for later anxiety among siblings who reported difficulty sharing their feelings with grieving parents (Eilertsen, Eilegård, Steineck, Nyberg, & Kreicbergs, 2013; Rosenberg et al., 2015). However, when bereaved parents provide support to their children, it has been beneficial (e.g., Wolchik et al., 2009). Given variability in percep-

tions of parental support, bereaved siblings may benefit from alternative sources of support (e.g., peers, teachers).

Significantly less is known about nonparental sources of support in the context of sibling bereavement. Although some bereaved siblings have described social support from close friends, peers, and teachers (Forward & Garlie, 2003; Martinson & Campos, 1991; Nolbris & Hellström, 2005) and improved peer relationships (Balk, 1983; Foster et al., 2012), others have reported feeling estranged and isolated from friends and peers, describing poorer social relationships and social withdrawal (Balk, 1983; Davies, 1991; Martinson & Campos, 1991). Even before the death, siblings of children with cancer report increased support from teachers and school staff, but also disruptions to school attendance, extracurricular activities, and friendships (Samson, Rourke, & Alderfer, 2016). However, school-based support has been found to be valued and beneficial for siblings of children with cancer (Alderfer & Hodges, 2010). Specifically, siblings of children with cancer reported receiving more or comparable levels of support from friends, classmates, and teachers as compared to parental support, with school-based support in turn relating to their adjustment and academic functioning (Alderfer & Hodges, 2010). Schools can also provide bereaved siblings with stability and a sense of connectedness that they may not have at home (Heath & Cole, 2012) and may be a critical setting for bereavement-related support. Close friends and schools have mitigated the effects of low support from parents in other contexts (Rubin et al., 2004); thus, social support from school-based sources may buffer against the negative effects of low parent support following sibling bereavement.

The availability, perceptions, and effects of different sources of social support may vary with age. In research with nonbereaved samples, teacher support was found to decrease with age, whereas friend support increased (Bokhorst, Sumter, & Westenberg, 2010; Furman & Buhrmester, 1992), with adolescents reporting more support from friends compared to parents (Bokhorst et al., 2010). Furthermore, social support has been found to reduce risk for emotional problems in siblings of children with cancer more strongly for adolescents compared to children (Barrera, Fleming, & Khan, 2004). Elementary-aged children may experience a qualitatively different relationship with their teachers compared to middle/high school adolescents, who often have multiple teachers. Given that children are more dependent on parents to facilitate their social activities with peers/friends outside of school, they may also be more vulnerable than adolescents. Thus, peer and friend support may be more valuable for adolescents, whereas teacher support may be more valuable for younger children.

We examined how different sources of nonparental social support were associated with grief and grief-related growth in siblings who experienced the death of their brother or sister from cancer. We expected that perceptions of more social support would relate to fewer grief symptoms and more grief-related growth. Given the critical importance of parental support and the potential for its decline following a child's death, it was hypothesized that nonparental sources of social support (close friend, peers, teacher[s]) would moderate associations between parental support and grief/grief-related growth. We predicted that low parental support would be associated with higher levels of grief and lower levels of growth when other nonparental sources of support were also low, but not when other support was high. In other words, we predicted that nonparental sources would buffer against negative effects of low

parental support. Lastly, we explored whether parental and nonparental sources of social support interacted differently for children versus adolescents. Although this aim was exploratory, we expected a stronger interaction between parental and nonparental social support for adolescents compared to children for close friend and peer support, whereas interactions with teacher support would be stronger for children than adolescents.

Methods

Procedure

This research was part of a larger longitudinal study of families following the death of a child from cancer (Gerhardt et al., 2012). Institutional Review Board (IRB) approval was obtained at each of the three children's hospitals in the United States and Canada, and all procedures were compliant with IRB provisions and standards. Bereaved families with a surviving sibling were identified from cancer registries at each site. Eligible siblings were (a) 8 to 18 years old, (b) in school without full-time special education, (c) English speaking, and (d) living within 100 miles of the hospital. Half-, step-, and adoptive siblings who did not live with the deceased child at time of death were eligible if they had regular contact. In families with multiple eligible siblings, one was randomly selected.

Families received a letter from the child's oncologist introducing the study 3–12 months after the death. Study staff called families approximately 2 weeks later to describe the study and assess interest in participating. If a parent was interested, staff members confirmed eligibility and arranged for data collection in the schools and homes of bereaved siblings (Gerhardt et al., 2012). Informed consent and assent were obtained from parents and children, respectively, at the home visit. Families were compensated for their time.

Participants

Of 169 eligible families initially contacted, 105 families (62% response rate) participated in the school visit phase of the study. A total of 88 families participated in the home visit (10 participants were initially recruited from a fourth hospital but were not followed due to relocation of the study investigator), with complete data for 85 siblings. Bereaved siblings were majority female (57.6%, $n = 49$), with an average age of 12.39 years ($SD = 2.65$). The sample was 74.4% White ($n = 64$), 9.1% Black ($n = 8$), and 15% other races ($n = 13$). Families had a range of annual income levels (17.0% earned \$25,000 or less, 26.1% earned \$25,001–\$50,000, 26.1% earned \$50,001–\$75,000, 12.5% earned \$75,001–\$100,000, and 14.8% earned over \$100,000, 3.4% missing). Mothers had an average of 13.55 years ($SD = 1.67$) of education, and fathers averaged 14.09 years ($SD = 1.74$). Sibling relationships were classified as full (84%, $n = 74$), half- (9%, $n = 8$), step- (5%, $n = 4$), or adoptive (2%, $n = 2$). About half of deceased children were male (54%, $n = 46$) and younger than bereaved siblings (54%, $n = 46$). Deceased children averaged 11.49 years of age ($SD = 4.98$) and were an average of 2.65 years ($SD = 2.36$) from diagnosis at time of death. Data collection occurred an average of 11.55 months after the death ($SD = 3.52$, range 6–24 months, 69% of siblings participated within one year of the death).

Measures

Social support. The Social Support Scale for Children (Harter, 1985) includes 24 items assessing children's perceptions of support from parents, teachers, peers, and close friends. Children were presented with statements in a structured alternative format to reduce the likelihood of socially desirable responses. Children first chose which of two statements is *most like them* and then indicated whether the chosen statement was *sort of true* or *really true* for them. Responses were summed with scores ranging from 6 to 24 (low to high perceived social support) for 6 items that comprise each of the four subscales (parent, teacher, peer, and close friend social support). The measure demonstrates adequate internal and test-retest reliability, and adequate internal, construct, and convergent validity (Lipski, Sifers, & Jackson, 2014). In this study, internal consistency was good, $\alpha = .83-.90$.

Grief and grief-related growth. The Hogan Sibling Inventory of Bereavement (Hogan & De Santis, 1996) is a 46-item questionnaire assessing the thoughts and feelings children experience after the death of their sibling. Children reported on their experiences during the past 2 weeks using a scale ranging from 1 (*does not describe me at all*) to 5 (*describes me very well*). Items are summed for two factor-derived scales, grief symptoms (e.g., "I have no control over my sadness") and grief-related growth (e.g., "I try to be kinder to other people"), which demonstrate good internal consistency and construct validity (Neimeyer & Hogan, 2001). Internal consistency in the current study was excellent, $\alpha = .91-.92$.

Analysis

Data were analyzed with SPSS, Version 24, using only siblings with complete data. Fewer than 5% of siblings had missing data ($n = 3$ out of 88 total siblings; 3.4%), with two siblings missing outcomes measures and one sibling missing social support data. Descriptive analyses and bivariate correlations were conducted separately for children and adolescents. Models tested whether associations between parent social support and grief/grief-related growth were moderated by nonparental sources of support (close friend, peer, teacher; 2-way interactions). Variables were centered as part of these 2-way interaction analyses to assist with interpretation. To test for differences between children versus adolescents, models examined whether interactions between parent and nonparental support were moderated by age (3-way interactions). Analyses

were conducted using a series of OLS regressions and 2-way (Model 1) and 3-way (Model 3) interactions in PROCESS, a macro for SPSS (Hayes, 2013). For post hoc 3-way interactions, age was dichotomized as child (8–12 years; $n = 44$) and adolescent (13–18 years; $n = 41$). Analyses using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) revealed that our sample ($N = 85$) provided sufficient power (.92) to detect medium effects ($f^2 = .15$) for the change in variance explained when adding a 3-way interaction to the model at an alpha of .05.

Results

Preliminary Analyses

Descriptive statistics and correlations are in Table 1 separately by age (children vs. adolescents). Age was significantly correlated with less grief for children but not adolescents. Relative to the total range of the measures, siblings generally reported relatively high levels of social support across all four sources, as well as low grief and moderate grief-related growth. Grief and grief-related growth were positively correlated for children but not adolescents. Sources of support were strongly intercorrelated, with the exception of nonsignificant correlations between adolescent friend support and parent/teacher support. Grief was associated with support from parents and peers for adolescents but not for children, whereas grief-related growth was associated with parent, teacher, and friend support across ages. All significant correlations were in expected directions, with more support related to lower grief and higher growth.

Parental by Non-Parental Social Support Interactions

Grief symptoms. Interactions between parent and nonparental sources of social support are in Table 2. Close friend ($p = .003$) and teacher support ($p = .017$) both moderated the association between parent support and grief symptoms. Contrary to predictions, more parent support was associated with less grief under conditions of average or high (+1 *SD*) levels of close friend support, $B = -1.45$, $SE = 0.58$, $p = .01$, and $B = -2.21$, $SE = 0.69$, $p = .002$, respectively, but not low (–1 *SD*) levels of close friend support, $B = -0.47$, $SE = 0.58$, $p = .42$ (see Figure 1A). Similarly, more parent support was associated with less grief when teacher support was average or high (+1 *SD*), $B = -1.93$, $SE =$

Table 1

Means, Standard Deviations, and Correlations Between All Variables for Children and Adolescents

Variable	1	2	3	4	5	6	7	Child <i>M</i> (<i>SD</i>)	Child range
1. Age		.02	.28	–.08	.30*	–.31*	–.14	10.36 (1.33)	8–12
2. Parent Support	–.15		.58***	.66***	.77***	.07	.32*	20.95 (3.78)	6–24
3. Peer Support	–.01	.52**		.66***	.78***	–.24	.10	18.86 (4.15)	7–24
4. Teacher Support	–.17	.56***	.36*		.69***	.01	.32*	20.22 (4.05)	6–24
5. Friend Support	.19	.27	.39*	.12		–.13	.33*	19.98 (4.39)	6–24
6. Grief	.04	–.50**	–.59***	–.18	–.22		.42**	55.83 (16.82)	30–91
7. Growth	–.02	.39*	.21	.37*	.39*	.04		69.11 (16.37)	40–104
Adol. <i>M</i> (<i>SD</i>)	14.71 (1.55)	20.65 (4.05)	20.19 (3.99)	19.93 (4.09)	22.39 (2.07)	54.00 (19.51)	77.17 (16.86)		
Adol. Range	13–18	6–24	6–24	8–24	17–24	25–108	36–102		

Note. Descriptive data are split by age, with children ($n = 44$) above the diagonal and adolescents ($n = 41$) below the diagonal.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2
Interactions Between Parental and Non-Parental Social Support Predicting Grief Symptoms and Grief-Related Growth

Moderator	Grief				Growth			
	B (SE)	F (df)	R ²	ΔR ²	B (SE)	F (df)	R ²	ΔR ²
Friend		4.89 (3,81)**	.15			6.09 (3,81)***	.18	
Parent	-1.45 (0.58)*				1.01 (0.53)			
Friend	-1.08 (0.66)				1.61 (0.61)**			
Parent × Friend	-0.27 (0.09)**	9.25 (1,81)**		.10	0.10 (0.08)	1.50 (1,81)		.01
Peer		6.54 (3,81)***	.19			3.87 (3,81)*	.12	
Parent	-0.44 (0.61)				1.73 (0.60)**			
Peer	-1.95 (0.53)***				0.13 (0.52)			
Parent × Peer	-0.12 (0.09)	1.86 (1,81)		.02	0.09 (0.08)	1.10 (1,81)		.01
Teacher		3.81 (3,81)*	.12			4.28 (3,81)**	.14	
Parent	-1.93 (0.66)**				0.96 (0.61)			
Teacher	-0.03 (0.61)				0.81 (0.57)			
Parent × Teacher	-0.22 (0.09)*	5.92 (1,81)*		.06	<.01 (0.08)	<.01 (1,81)		<.01

Note. B = unstandardized coefficient.
* p < .05. ** p < .01. *** p < .001.

0.66, p = .004, and B = -2.79, SE = 0.85, p = .002, respectively, but not at low levels (-1 SD) of teacher support, B = -1.05, SE = 0.62, p = .095 (see Figure 1B). The association between parent support and grief was not moderated by peer support.

Grief-related growth. Nonparental sources of social support did not significantly moderate the association between parent support and growth (all ps > .22).

Parental Support by Non-Parental Support by Age 3-Way Interactions

Grief symptoms. A significant 3-way interaction emerged for peer support, F(7, 77) = 5.89, p < .001; f² = .10, B = 0.52, SE = 0.19, p = .007, with different interaction patterns for children, B = -0.22, SE = 0.11, p = .047, versus adolescents, B = 0.31, SE = 0.15, p = .049 (see Figure 2A). For children, parent support was not associated with grief under any conditions of peer support. However, consistent with predictions, more parent support was associated with less grief for adolescents reporting low peer support, B = -2.36, SE = 0.87, p = .008. The interaction between

teacher and parent support was not moderated by age, F(7, 77) = 2.62, p = .017; B = -0.05, SE = 0.21, p = .83, nor was the interaction between close friend and parent support, F(7, 77) = 3.49, p = .003; B = 0.71, SE = 0.36, p = .053.

Grief-related growth. The interaction between parent and close friend support was moderated by age, F(7, 77) = 4.54, p < .001; f² = .08, B = 0.83, SE = 0.33, p = .013, such that the interaction of parent and close friend support was significant for adolescents, B = 0.83, SE = 0.31, p = .009, but not for children, B < 0.01, SE = 0.10, p = .98 (see Figure 2B). Surprisingly, more parent support was associated with more growth when close friend support was high (+1 SD), B = 3.31, SE = 0.97, p = .001. Similarly, the interaction between peer and parent support was moderated by age, F(7, 77) = 3.46, p = .003; f² = .05, B = 0.39, SE = 0.19, p = .045, such that the interaction of peer and parent support was significant for adolescents, B = 0.37, SE = 0.16, p = .019, but not for children, B = -0.01, SE = 0.11, p = .89 (see Figure 2C). Counter to predictions, more parent support was associated with more growth when peer support was average or

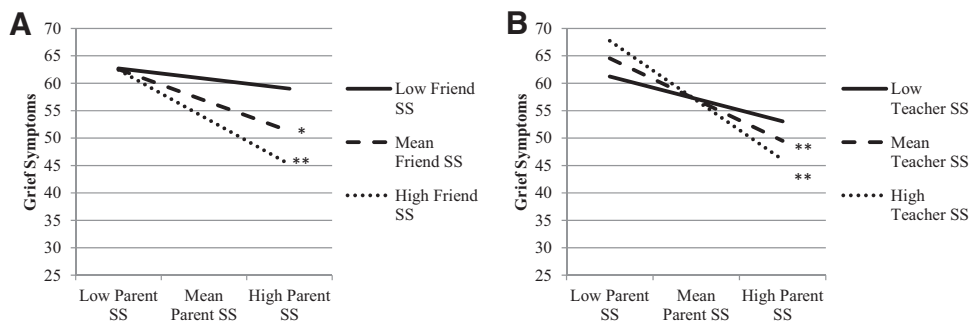


Figure 1. A. Parent by friend support predicting grief. B. Parent by teacher support predicting grief. A–B. Significant interactions between parental and nonparental social support predicting grief. High and low support are ± one standard deviation from the mean. One standard deviation above the mean was replaced with the maximum value for friend and teacher support because one standard deviation above the mean was outside the valid range for the data. SS = Social Support. * p < .05. ** p < .01. *** p < .001.

This document is copyrighted by the American Psychological Association or one of its allied publishers. This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

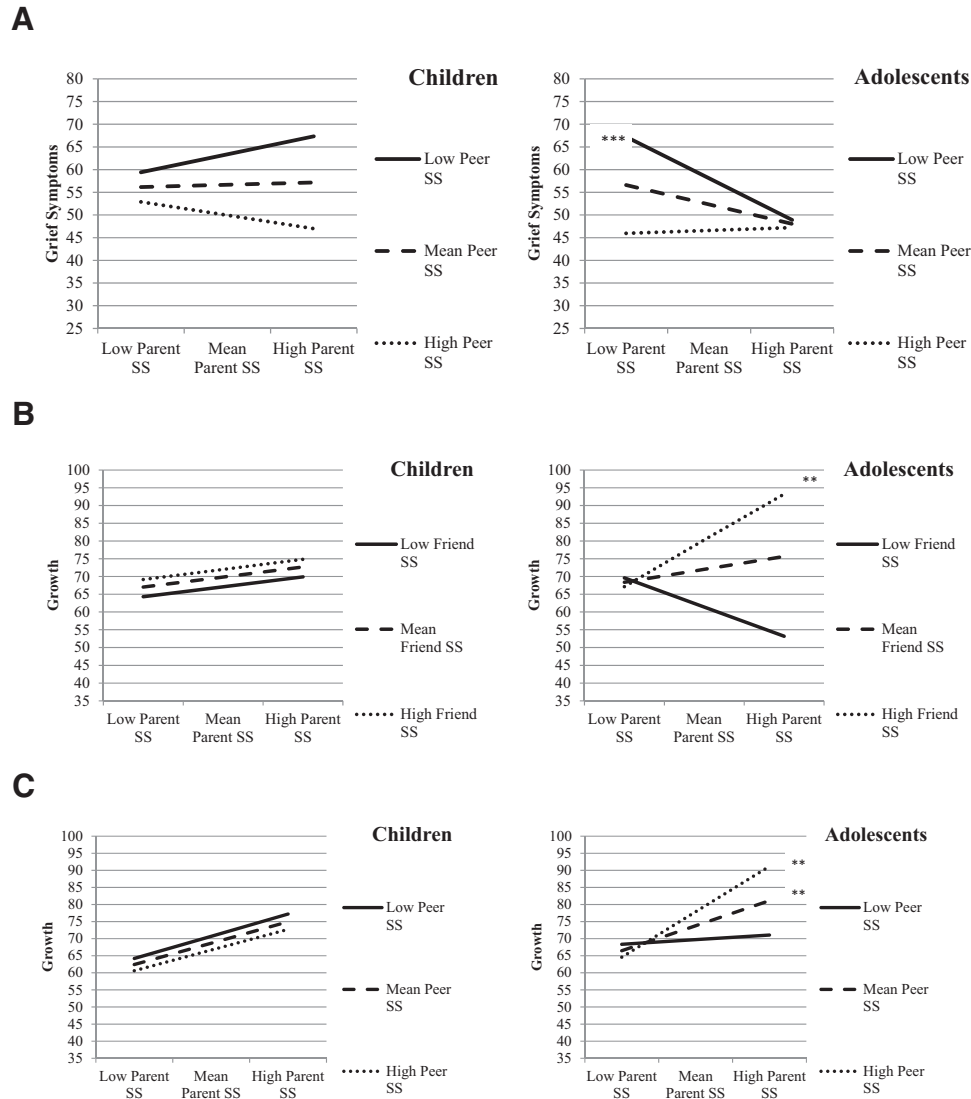


Figure 2. A. Parent by peer interaction in children predicting grief; parent by peer interaction in adolescents predicting grief. B. Parent by friend interaction in children predicting growth; parent by friend interaction in adolescents predicting growth. C. Parent by peer interaction in children predicting growth; parent by peer interaction in adolescents predicting growth. A–C. Significant 3-way interactions between parental support, nonparental support, and bereaved siblings' age predicting grief symptoms and grief-related growth. High and low support are \pm one standard deviation from the mean. For friend and peer support, one standard deviation above the mean was replaced with the maximum value because one standard deviation above the mean was outside of the valid range for the data. * $p < .05$. ** $p < .01$. *** $p < .001$.

high (+1 SD), $B = 1.88$, $SE = 0.71$, $p = .010$, and $B = 3.42$, $SE = 1.03$, $p = .001$, respectively. The interaction between teacher and parent support was not moderated by age, $F(7, 77) = 2.81$, $p = .012$; $B = -0.02$, $SE = 0.20$, $p = .92$.

Discussion

Given limited research examining factors associated with the adjustment of bereaved siblings, we examined the association between school-based sources of social support (close friend, peers, and teacher[s]) with grief/grief-related growth and whether school-based support moderated the association between parent

support and grief/grief-related growth. Social support was generally associated with fewer grief symptoms and more grief-related growth. As predicted, the effect of parent support varied according to nonparental sources of support. However, such patterns differed for elementary aged children versus middle/high school adolescents.

In general, social support was associated with less grief and more grief-related growth. However, consistent with other populations (Cauce et al., 1992; Rueger et al., 2008; Wolchik et al., 2009), associations varied by source of support. Specifically, more parent, friend, and teacher support was associated with more

grief-related growth, whereas more support from parents and peers was associated with fewer grief symptoms for adolescents. Findings that parent support is the only source directly associated with both grief and growth mirror research demonstrating that family support is more consistently and strongly linked with child adjustment (Cauce et al., 1992). These findings are similar to studies indicating that parent support is inversely related to distress in bereaved siblings (e.g., Eilertsen et al., 2013; Rosenberg et al., 2015) and positively associated with grief-related growth in parentally bereaved children (Wolchik et al., 2009). However, our research is unique in identifying links between school-based, nonparental sources of social support and reports of grief and growth in bereaved siblings. Thus, in addition to parents, close friends, peers, and teachers may facilitate adjustment for bereaved siblings.

Although close friend and teacher support were not directly associated with grief, both moderated the association between parent support and grief. In contrast with predictions that nonparental sources would serve a buffering role, close friend and teacher support instead appeared to accentuate the positive effect of parent support in reducing grief. These interactions did not vary by age, suggesting equal benefit for bereaved siblings in elementary and middle/high school. Our findings are somewhat surprising given that teacher support has been found to decline with age, whereas support from close friends was found to increase (e.g., Bokhorst et al., 2010). Despite reporting a lack of competence in their role with students following bereavement or trauma (Alisic, 2012), our findings indicate that teachers, along with close friends, have the potential to play a valuable role in supporting bereaved siblings.

Although the peer by parent interaction was not significant, exploratory 3-way interactions found such an interaction for adolescents. As predicted, peer support appeared to buffer against the effect of low parent support for middle/high school adolescents but not for elementary schoolchildren. Specifically, more parent support was associated with less grief when low peer support was reported. However, when high peer support was reported, parent support was no longer associated with grief. These findings suggest that low parental support may be less detrimental in the context of high peer support. Thus, consistent with prior research (Meyerson, Grant, Carter, & Kilmer, 2011), the buffering role of social support may depend on the source of support.

Although interactions did not initially emerge with respect to growth, exploratory analyses suggest that interactions may exist for middle/high school aged adolescents. Specifically, close friend and peer support interacted with parent support for adolescents such that friend and peer support appeared to accentuate the positive effect of parent support in facilitating growth. In contrast, no such interaction emerged for children. These findings are consistent with age differences in the posttraumatic growth literature, with age positively correlated with perceptions of growth following trauma/adversity (e.g., Milam, Ritt-Olson, & Unger, 2004; Wolchik et al., 2009). Age-related cognitive developments may be necessary for meaning-making and benefit-finding to occur (Milam et al., 2004), and some argue that adolescents are more capable of deriving growth from adversity because they have a more developed schema (Meyerson et al., 2011). However, these findings are contrasted with the lack of correlation between age and grief-related growth, suggesting instead that social support may differentially promote growth for adolescents versus children. So-

cial support may promote growth by providing an opportunity for retelling the narrative of the event and receiving others' perspectives, which may in turn support the type of cognitive processing (e.g., meaning making, rumination, cognitive restructuring) necessary for growth (Tedeschi & Calhoun, 2004; Wolchik et al., 2009). One possibility is that childhood friends and peers may be less capable of facilitating meaning making and cognitive restructuring as compared to adolescent friends and peers. Further research is needed to better understand the effects of age on grief-related growth and to disentangle at which ages social support from different sources might foster growth.

Surprisingly, perceptions of all sources of support were generally high in the current study. This stands in contrast to research suggesting that bereaved parents are less emotionally available and more distant from surviving children (Lehman et al., 1989; Martinson & Campos, 1991), with bereaved siblings feeling estranged and socially isolated from friends and peers (Balk, 1983; Davies, 1991; Martinson & Campos, 1991). This, together with relatively low levels of grief, suggests that this sample may be relatively resilient, with adequate resources to cope with the death. Future research examining the possible buffering role of nonparental social support in more distressed samples may better elucidate under what conditions different sources of support may mitigate the effects of low parent support. It will also be valuable to examine these phenomena in more diverse samples across time.

Implications for Practice

Bereaved siblings may benefit from school-based programs designed to facilitate support from teachers, peers, and close friends. Although teachers report low confidence in providing support to students following death and trauma (Alisic, 2012), teacher support may play a valuable role in siblings' adjustment across grades. Therefore, teachers may benefit from guidance from school psychologists on tangible ways they can support bereaved siblings as a means of increasing comfort and confidence in providing such social support. For example, teachers might be encouraged to foster a sense of community in the classroom, provide bereaved siblings with reassurance, assist siblings with expressing their feelings/worries, show extra patience, and/or use bibliotherapy (see Heath & Cole, 2012 for examples). Multiple online resources are also available to provide guidance to teachers, such as the Coalition to Support Grieving Students (www.grievingstudents.org) and the The Dougy Center: The National Center for Grieving Children & Families (www.dougy.org). Middle and high school bereaved siblings in particular may benefit from increased opportunities for support from friends and peers. Given the risk of increased social withdrawal (e.g., Foster et al., 2012), teachers and school psychologists may play a valuable role in promoting support from peers by facilitating increased social interactions and connectedness, such as by maintaining routines and involvement in extracurricular activities (Alderfer & Hodges, 2010; Heath & Cole, 2012; Samson et al., 2016). Importantly, it may be beneficial for school psychologists to develop family school partnerships to foster adjustment and a sense of connectedness for bereaved siblings (Alderfer & Hodges, 2010; Samson et al., 2016). School psychologists should also assess the amount of support bereaved siblings experience at home and target those reporting low parental support for intervention. However, given that

nonparental support generally did not play a compensatory role, this also underscores the importance of intervening at the family level. Thus, siblings may benefit from referrals for family-based interventions to promote parents' ability to provide support to their surviving children, even in the context of promoting other sources of support.

Limitations and Future Directions

Our findings should be considered within the context of several limitations. Most notably, this study is correlational and cross-sectional. Thus, causality and direction of effects are not able to be determined. Longitudinal research could clarify when social support from different sources may be most potent or beneficial for reducing grief and fostering growth. Additionally, our measurement approach did not differentiate between various forms of social support (e.g., instrumental, emotional support), nor whether teacher or parent support was from one or multiple teachers/parents. These nuances may be why sources of support varied in their relation to grief and growth. Further differentiating the form of support experienced from different sources may clarify the mechanisms by which social support helps siblings adjust following the death. Bereaved siblings may also experience social support from other sources, such as other siblings, extended family, or formal intervention (e.g., school psychologists, therapists), and the effect of social support may depend on other factors not examined in this study, such as gender. Although most siblings were within a year of the death, time since death ranged from 6 to 24 months, with 31% within one to two years. Finally, the sample was primarily White and may not reflect the experiences of more diverse populations. This is important given that weaker associations have emerged between social support and growth for racial minorities (Meyerson et al., 2011). To better understand who may benefit from different sources of support, future research should consider gender differences, assess a wider array of sources, and include more diverse samples. Although an improvement over other studies in this area, we had a small sample size and limited power. It is possible that families that declined were more distressed, with fewer resources to cope.

Conclusion

Social support from school-based sources may reduce grief and promote growth among bereaved siblings. Specifically, teachers, friends, and peers may enhance the positive effects of parent support, with peer support also buffering against the effects of low parental support. Thus, bereaved siblings may benefit from bolstering school-based support across ages, with adolescents especially benefiting from stronger social support from friends and peers.

References

- Alderfer, M. A., & Hodges, J. A. (2010). Supporting siblings of children with cancer: A need for family-school partnerships. *School Mental Health, 2*, 72–81. <http://dx.doi.org/10.1007/s12310-010-9027-4>
- Alisic, E. (2012). Teachers' perspectives on providing support to children after trauma: A qualitative study. *School Psychology Quarterly, 27*, 51–59. <http://dx.doi.org/10.1037/a0028590>
- Balk, D. (1983). Effects of sibling death on teenagers. *Journal of School Health, 53*, 14–18. <http://dx.doi.org/10.1111/j.1746-1561.1983.tb04046.x>
- Balk, D. E. (1991). Death and adolescent bereavement: Current research and future directions. *Journal of Adolescent Research, 6*, 7–27. <http://dx.doi.org/10.1177/074355489161002>
- Barrera, M., Fleming, C. F., & Khan, F. S. (2004). The role of emotional social support in the psychological adjustment of siblings of children with cancer. *Child: Care, Health and Development, 30*, 103–111. <http://dx.doi.org/10.1111/j.1365-2214.2003.00396.x>
- Bokhorst, C. L., Sumter, S. R., & Westenberg, P. M. (2010). Social support from parents, friends, classmates, and teachers in children and adolescents aged 9 to 18 years: Who is perceived as most supportive? *Social Development, 19*, 417–426. <http://dx.doi.org/10.1111/j.1467-9507.2009.00540.x>
- Cauce, A. M., Hannan, K., & Sargeant, M. (1992). Life stress, social support, and locus of control during early adolescence: Interactive effects. *American Journal of Community Psychology, 20*, 787–798. <http://dx.doi.org/10.1007/BF01312608>
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310–357. <http://dx.doi.org/10.1037/0033-2909.98.2.310>
- Davies, B. (1991). Long-term outcomes of adolescent sibling bereavement. *Journal of Adolescent Research, 6*, 83–96. <http://dx.doi.org/10.1177/074355489161007>
- Eilertsen, M. E. B., Eilegård, A., Steineck, G., Nyberg, T., & Kreicbergs, U. (2013). Impact of social support on bereaved siblings' anxiety: A nationwide follow-up. *Journal of Pediatric Oncology Nursing, 30*, 301–310. <http://dx.doi.org/10.1177/1043454213513838>
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149–1160. <http://dx.doi.org/10.3758/BRM.41.4.1149>
- Forward, D. R., & Garlie, N. (2003). Search for new meaning: Adolescent bereavement after the sudden death of a sibling. *Canadian Journal of School Psychology, 18*, 23–53. <http://dx.doi.org/10.1177/082957350301800103>
- Foster, T. L., Gilmer, M. J., Vannatta, K., Barrera, M., Davies, B., Dietrich, M. S., . . . Gerhardt, C. A. (2012). Changes in siblings after the death of a child from cancer. *Cancer Nursing, 35*, 347–354. <http://dx.doi.org/10.1097/NCC.0b013e3182365646>
- Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development, 63*, 103–115. <http://dx.doi.org/10.2307/1130905>
- Gerhardt, C. A., Fairclough, D. L., Grossenbacher, J. C., Barrera, M., Gilmer, M. J., Foster, T. L., . . . Vannatta, K. (2012). Peer relationships of bereaved siblings and comparison classmates after a child's death from cancer. *Journal of Pediatric Psychology, 37*, 209–219. <http://dx.doi.org/10.1093/jpepsy/jsr082>
- Harter, S. (1985). *Manual for the Social Support Scale for Children*. Denver, CO: University of Denver.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.
- Heath, M. A., & Cole, B. V. (2012). Strengthening classroom emotional support for children following a family member's death. *School Psychology International, 33*, 243–262. <http://dx.doi.org/10.1177/0143034311415800>
- Herberman Mash, H. B., Fullerton, C. S., & Ursano, R. J. (2013). Complicated grief and bereavement in young adults following close friend and sibling loss. *Depression and Anxiety, 30*, 1202–1210. <http://dx.doi.org/10.1002/da.22068>
- Hogan, N., & De Santis, L. (1996). Basic constructs of a theory of

- adolescent sibling bereavement. In D. Klass, P. R. Silverman, & S. L. Nickman (Eds.), *Continuing bonds: New understandings of grief* (pp. 235–254). Philadelphia, PA: Taylor & Francis.
- Hogan, N. S., DeSantis, L., Demi, A. S., Cowles, K. V., & Ross, H. M. (1994). Things that help and hinder adolescent sibling bereavement. *Western Journal of Nursing Research, 16*, 132–153. <http://dx.doi.org/10.1177/019394599401600202>
- Hogan, N. S., Greenfield, D. B., & Schmidt, L. A. (2001). Development and validation of the Hogan Grief Reaction Checklist. *Death Studies, 25*, 1–32. <http://dx.doi.org/10.1080/074811801750058609>
- Hogan, N. S., & Schmidt, L. A. (2002). Testing the grief to personal growth model using structural equation modeling. *Death Studies, 26*, 615–634. <http://dx.doi.org/10.1080/07481180290088338>
- Lehman, D. R., Lang, E. L., Wortman, C. B., & Sorenson, S. B. (1989). Long-term effects of sudden bereavement: Marital and parent–child relationships and children’s reactions. *Journal of Family Psychology, 2*, 344–367.
- Lipski, D. M., Sifers, S. K., & Jackson, Y. (2014). A study of the psychometric properties of the Social Support Scale for Children. *Journal of Psychopathology and Behavioral Assessment, 36*, 255–264. <http://dx.doi.org/10.1007/s10862-013-9383-0>
- Long, K. A., Marsland, A. L., & Alderfer, M. A. (2013). Cumulative family risk predicts sibling adjustment to childhood cancer. *Cancer, 119*, 2503–2510. <http://dx.doi.org/10.1002/cncr.28077>
- Martinson, I. M., & Campos, R. G. (1991). Adolescent bereavement: Long-term responses to a sibling’s death from cancer. *Journal of Adolescent Research, 6*, 54–69. <http://dx.doi.org/10.1177/074355489161005>
- Meyerson, D. A., Grant, K. E., Carter, J. S., & Kilmer, R. P. (2011). Posttraumatic growth among children and adolescents: A systematic review. *Clinical Psychology Review, 31*, 949–964. <http://dx.doi.org/10.1016/j.cpr.2011.06.003>
- Milam, J. E., Ritt-Olson, A., & Unger, J. B. (2004). Posttraumatic growth among adolescents. *Journal of Adolescent Research, 19*, 192–204. <http://dx.doi.org/10.1177/0743558403258273>
- Neimeyer, R. A., & Hogan, N. S. (2001). Quantitative or qualitative? Measurement issues in the study of grief. In M. S. Stroebe, R. Hansson, W. Stroebe, & H. Schut (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp. 89–118). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/10436-004>
- Nolbris, M., & Hellström, A. L. (2005). Siblings’ needs and issues when a brother or sister dies of cancer. *Journal of Pediatric Oncology Nursing, 22*, 227–233. <http://dx.doi.org/10.1177/1043454205274722>
- Packman, W., Horsley, H., Davies, B., & Kramer, R. (2006). Sibling bereavement and continuing bonds. *Death Studies, 30*, 817–841. <http://dx.doi.org/10.1080/07481180600886603>
- Rosenberg, A. R., Postier, A., Osenga, K., Kreicbergs, U., Neville, B., Dussel, V., & Wolfe, J. (2015). Long-term psychosocial outcomes among bereaved siblings of children with cancer. *Journal of Pain and Symptom Management, 49*, 55–65. <http://dx.doi.org/10.1016/j.jpainsymman.2014.05.006>
- Rubin, K. H., Dwyer, K. M., Booth-LaForce, C., Kim, A. H., Burgess, K. B., & Rose-Krasnor, L. (2004). Attachment, friendship, and psychosocial functioning in early adolescence. *The Journal of Early Adolescence, 24*, 326–356. <http://dx.doi.org/10.1177/0272431604268530>
- Rueger, S. Y., Malecki, C. K., & Demaray, M. K. (2008). Gender differences in the relationship between perceived social support and student adjustment during early adolescence. *School Psychology Quarterly, 23*, 496–514. <http://dx.doi.org/10.1037/1045-3830.23.4.496>
- Samson, K., Rourke, M. T., & Alderfer, M. A. (2016). A qualitative analysis of the impact of childhood cancer on the lives of siblings at school, in extracurricular activities, and with friends. *Clinical Practice in Pediatric Psychology, 4*, 362–372. <http://dx.doi.org/10.1037/cpp0000161>
- Sveen, J., Eilegård, A., Steineck, G., & Kreicbergs, U. (2014). They still grieve—A nationwide follow-up of young adults 2–9 years after losing a sibling to cancer. *Psycho-Oncology, 23*, 658–664. <http://dx.doi.org/10.1002/pon.3463>
- Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15*, 1–18. http://dx.doi.org/10.1207/s15327965pli1501_01
- Thompson, A. L., Miller, K. S., Barrera, M., Davies, B., Foster, T. L., Gilmer, M. J., . . . Gerhardt, C. A. (2011). A qualitative study of advice from bereaved parents and siblings. *Journal of Social Work in End-of-Life & Palliative Care, 7*, 153–172. <http://dx.doi.org/10.1080/15524256.2011.593153>
- Wilkins, K. L., & Woodgate, R. L. (2005). A review of qualitative research on the childhood cancer experience from the perspective of siblings: A need to give them a voice. *Journal of Pediatric Oncology Nursing, 22*, 305–319. <http://dx.doi.org/10.1177/1043454205278035>
- Wolchik, S. A., Cox, S., Tein, J. Y., Sandler, I. N., & Ayers, T. S. (2009). Six-year longitudinal predictors of posttraumatic growth in parentally bereaved adolescents and young adults. *Omega: Journal of Death and Dying, 58*, 107–128. <http://dx.doi.org/10.2190/OM.58.2.b>

Received June 30, 2017

Revision received January 22, 2018

Accepted January 28, 2018 ■