Published in final edited form as:

J Child Fam Stud. 2017 December ; 26(12): 3490–3501. doi:10.1007/s10826-017-0835-0.

Caregivers' positive emotional expression and children's psychological functioning after parental loss

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Abstract

The death of a loved one, particularly a parent, has been identified as not only the most common, but also the most distressing form of adversity youth may experience in their lifetime. Surviving caregivers' communication with their children may play a critical role in shaping bereaved children's psychological functioning. However, few studies have examined the specific content (e.g., word usage) of caregivers' verbal communication as a predictor of psychological functioning in bereaved youth. In a sample of 39 parentally-bereaved children and their surviving caregivers, we investigated whether the frequency of caregivers' use of positive emotion words (e.g., "love", "happy", "hope") during a reminiscing task about the deceased was associated with children's psychological functioning and coping. In a cross-sectional analysis, we specifically examined whether these associations were moderated by the amount of time passed since children lost their parents. The Linguistic Inquiry and Word Count Program (LIWC) was used to code and evaluate the percentage of positive emotion words caregivers used during the discussion. When caregivers used more positive emotion words, children were less likely to experience depression, anxiety, and avoidant coping. Those associations were present for children who had experienced parental loss

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Conflict of Interest:

The authors declare that there is no conflict of interest.

Compliance with Ethical Standards:

Ethical Approval:

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent:

Informed consent was obtained from all individual participants included in the study.

Author Contributions:

BMW: analyzed the data and wrote the paper. JBK: designed the study and collaborated in the writing and editing of the paper. CML: contributed theoretical insight and edited the final manuscript. RSE: collaborated in the editing of the final manuscript.

at least 105 days prior to the study. Our findings have implications for how caregivers can support their children and help to alleviate psychological distress in the aftermath of parental loss.

Keywords

bereavement; children; positive emotion; caregiver; language

Introduction

Approximately 151 million children worldwide have experienced the death of a parent (UNICEF, 2013). Although the field of childhood bereavement is still in a nascent state, existing studies suggest that parental bereavement is associated with an increased risk for emotional and behavioral difficulties (e.g., depression, anxiety, substance abuse; Dowdney, 2000; Kaplow, Saunders, Angold, & Costello, 2010). Despite the prevalence of parental loss, little is known about psychosocial factors that are linked to children's positive adjustment, including psychological health and adaptive coping, following the death of a caregiver. A growing literature is beginning to highlight the critically important role that surviving adult caregivers play in helping bereaved children to grieve in healthy and adaptive ways. Kaplow, Layne, & Pynoos (2014a) refer to this as *parental grief facilitation* and highlight the need for future research to empirically test pathways through which caregivers' communication may promote bereaved children's healthy psychological adjustment.

Recent research suggests that certain forms of communication between surviving caregivers and their bereaved youth can positively shape children's responses to loss. For example, mothers' *positive parenting* behaviors (e.g., parental warmth, engagement, hugging, good eye contact) are associated with lower distress in children who recently lost a father (Shapiro, Howell, & Kaplow, 2014). Similarly, other studies of bereaved youth report that caregivers' verbal and non-verbal displays of empathic and supportive communication are inversely related to children's psychological distress (e.g., Howell, Shapiro, Layne, & Kaplow, 2015; Lin, Sandler, Ayers, Wolchik, & Luecken, 2004; Saldinger, Porterfield, & Cain, 2004).

General conversations that encourage bereaved youth to positively reminisce about the deceased parent are theorized to produce psychological benefits. These conversations can ease the pain of separation distress for bereaved youth and foster a sense of connection to the deceased (Castle & Phillips, 2003; Kaplow, Layne, & Pynoos, 2014a; Kaplow et al., 2012). Grief and mourning processes among youth typically involve positively reminiscing about the deceased person (Saltzman, Steinberg, Layne, Aisenberg, & Pynoos, 2001), and surviving caregivers play a critical role in assisting bereaved children with this task (Kaplow, Layne, & Pynoos, 2014a). Positive reminiscing between a caregiver and bereaved child may include both verbal and non-verbal interactions, including sharing favorite memories about the deceased, looking at pictures or videos of the deceased, or discussing traits, behaviors, or characteristics of the deceased that the caregiver and child both value (Kaplow et al., 2014a; Kaplow et al., 2012; Kaplow, Layne, Saltzman, Cozza, & Pynoos, 2013). These activities can help bereaved youth form an internalized representation of the deceased person that can

alleviate separation distress and foster an ongoing healthy connection to the deceased (Klass, Silverman, & Nickman, 1996).

Reminiscing with surviving caregivers is theorized to serve adaptive functions for children through several different pathways. First, exposure to positive emotions through positive reminiscing may foster children's sense of psychological well-being, including optimism about the future (Fredrickson, 2001). Specifically, exposure to positive emotions in the context of adversity is theorized to enhance one's ability to find meaning in times of stress and help to buffer individuals from the impact of upsetting or negative cognitions (Fredrickson, 2001, 2004; Tugade & Fredrickson, 2004). In this way, caregivers who use positive emotion words (e.g., happy, love, joy) in their discussions with their children may be better able to help children assign meaning and foster personal growth in response to their recent loss.

Second, reminiscing about pleasant memories in general is theorized to evoke positive emotion and bolster social bonds (Bryant, Smart, & King, 2005; Wildschut, Sedikides, Arndt, & Routledge, 2006). Positive emotional exchanges between caregivers and their children while reminiscing may bring about joking, smiling, and laughter. Keltner and Bonanno (1997) found that genuine smiling and laughter in bereaved individuals was associated with less distress and anger, more enjoyment, and stronger social relations. In addition, caregivers' expressions of positive emotion (e.g., happiness, optimism) may elicit similar emotions in children (i.e., emotional contagion, Hatfield, Cacioppo, & Rapson, 1994). In summary, caregiver-facilitated reminiscing can help to encourage children's expression of positive emotion, enhance social bonds, and promote meaning-making and optimism, thereby reducing psychological distress (Kaplow et al., 2012; Kaplow, Layne, et al., 2014a).

Despite the potential benefits of positive reminiscing, it is not uncommon for caregivers to avoid reminiscing about the deceased with their children due to their own concerns about *how* and *when* to engage in these discussions as well as their own psychological distress in the aftermath of the death (Kaplow, Layne, et al., 2014a). In addition, it is important to clarify the circumstances under which caregivers' expression of positive emotion may *be less* helpful to bereaved youth. The relative helpfulness of efforts to facilitate positive reminiscing by the surviving parent may vary as a function of the amount of time that has elapsed since the death and the degree of intensity of the child's grief reactions. Specifically, in the immediate aftermath of parental death (e.g., within the first few months), children are expected to feel sad and distressed over the loss (e.g., Kaplow et al., 2012), and may feel invalidated if caregivers are expressing too much positivity. This type of emotional dysynchrony can create breakdowns in communication between bereaved parents and their children (Kaplow, Layne, et al., 2014a). Indeed, caregivers' attempts to positively reminisce about the deceased person shortly after the death may be associated with higher levels of distress among their bereaved youth (Kaplow, Layne, et al., 2014a). In contrast, after the initial intensity of the child's grief reactions (e.g., intense separation distress or identity distress) has begun to recede and diminish the child may feel better equipped and ready to positively reminisce about the deceased (such as talking about positive, happy memories) and may thus derive more benefit from such discussions. For example, heightened

physiological responses in children immediately after the death (Kaplow, Shapiro et al., 2013), may begin to diminish as time passes and allow the child to feel more relaxed as they discuss their deceased parent.

Accordingly, this study builds on prior findings by further exploring ways in which caregivers' language (i.e., the specific words they use in discussions about the deceased person) may be associated with children's psychological functioning following parental death. The aim of the current study was to explore associations between caregiver-facilitated reminiscing and bereaved children's psychological functioning as well as potential windows of time in which these discussions may be more or less beneficial to bereaved youth. The study sample consisted of 39 recently-bereaved children and their surviving caregivers who participated in a reminiscing task. On average, children lost their parent at approximately 3.5 months (106 days) prior to participation in the reminiscing task. The task involved jointly discussing two standardized prompts designed to elicit positive emotional exchanges between caregiver and child. Given the study focus on *caregiver-facilitated* reminiscing, we used a linguistic coding program (Linguistic Inquiry and Word Count Program, LIWC; Pennebaker, Booth, & Francis, 2007) to analyze *caregivers'* portions of the "positive reminiscing" interview. This study tested two hypotheses. First, we expected a main effect of caregivers' use of positive emotion words on children's psychological functioning. Specifically, we hypothesized that caregivers' use of positive emotion words (e.g., happy and joy) would be inversely associated with children's psychological distress (as measured by anxiety and depression) and avoidant coping. Second, we expected a significant interaction between caregivers' use of positive emotion words, and time elapsed since the death of the other parent, in the prediction of children's psychological functioning. Specifically, we hypothesized that caregivers' use of positive emotion words would be *positively* associated with levels of psychological distress and with avoidant coping in children who had lost their parent more recently (at approximately 3 months or less), and *inversely* associated with psychological distress and avoidant coping in children who had lost their parent less recently (at approximately 3 months or more).

Method

Participants

The sample was composed of 39 bereaved children (18 females) and their surviving caregivers (30 females) who took part in a larger study designed to identify risk and protective factors associated with children's responses to parental death (see Kaplow, Shapiro, et al., 2013 for detailed information regarding study design). Inclusionary criteria were that the child: (1) experienced the death of a parent within the last six months, (2) was between the ages of 3 and 12 at the time of the parent's death, (3) spoke English, and (4) did not have cognitive deficits severe enough to interfere with comprehension of assessment measures. Multiple children from the same family were eligible to participate. The children and their caregivers were recruited through bereavement support centers and hospital settings throughout the state of Michigan in the United States.

During study recruitment, 56 families were approached, 41 of whom agreed to participate. We included only children aged 7 and older in the current sample given that self-report

assessment tools were not validated for children under age 7 and were therefore not administered (a sample delimitation), producing an effective sample of 39 bereaved children and their surviving caregivers. Caregivers were biological parents ($n = 26$ mothers, $n = 9$ fathers), grandmothers ($n = 2$), an adoptive mother ($n = 1$), and aunt ($n = 1$). Caregivers' ages ranged from 28 to 70 years ($M = 40.85$, $SD = 9.30$), 77% completed at least some college, and ethnicities were self-identified as 79% Caucasian, 8% Black or African American, 8% Hispanic, and 5% Asian.

The 39 bereaved children ranged in age from 7 to 13 years ($M = 9.26$ years, $SD = 2.00$); 69% of whom were identified by their caregivers as Caucasian, 10% as Black or African American, 8% as Hispanic, 5% as Asian, and 8% as mixed or other ethnicities. All children were bereaved by the death of a biological parent: 69% had lost their father and 31% their mother. Twenty-eight percent of the deceased parents died from anticipated illness (e.g., cancer), 28% from sudden or natural causes (e.g., heart attack or stroke), 20% were drug-related (e.g., overdose), 15% were accidents (e.g., traffic accident), and 8% were suicides. The recency of parental death ranged from 29 to 208 days prior to the study interview ($M = 105.92$ days, $SD = 45.74$).

Procedure

The University of Michigan Medical School Institutional Review Board approved all study procedures. Participating caregivers provided informed consent, and children gave verbal assent. Caregivers completed measures of demographics and family history information at the beginning of the study (e.g., their own psychological functioning, child's age and ethnicity, cause of the child's parent's death). Children separately completed a battery of psychological and behavioral measures. After completing these measures, children and their caregivers jointly participated in a 10-minute communication task in which they were asked to discuss two standardized "positive reminiscing" prompts designed to elicit positive emotional responses from caregivers and children: *"Please talk together about your favorite memories of the deceased parent,"* and *"Please talk together about what (child) has in common with the deceased parent."* These prompts were chosen to evoke positive emotional content and impose as little psychological and relational stress as possible on participants. Master's- or doctoral-level clinicians experienced in working with bereaved adults and children conducted all semi-structured interviews. Discussions were videotaped to ensure completeness and accuracy; the current study includes data from all 39 child-caregiver dyads. Families were financially compensated for their time.

Measures

Multidimensional Anxiety Scale for Children (MASC)—Children completed the MASC (March, Parker, Sullivan, Stallings, & Conners, 1997), a widely-used measure of anxiety in children aged 8–19 years. The MASC ($\alpha = .93$) includes 39 items, such as "I get shaky or jittery", "I am scared", and "I feel troubled." Baldwin and Dadds (2007) report evidence of adequate construct validity. Children rated how often they experience each symptom on a 4-point scale ranging from 0 (*never true*) to 3 (*often true*). Items were summed to generate a total anxiety score; higher scores indicate greater symptoms of

anxiety. Ten children (26%) in the current study met or exceeded the clinical cutoff for child anxiety.

Short Mood and Feelings Questionnaire (SMFQ)—The SMFQ (Angold et al., 1995) was used to assess child depressive symptoms and was developed for children and adolescents 6–17 years of age. This measure has been used in previous research to assess depressive symptoms in bereaved children (Shapiro et al., 2014). Children responded to 13 items ($\alpha = .71$) about how frequently within the past two weeks they experienced problems such as “I cry a lot”, “I felt I was a bad person” and “I felt miserable or unhappy.” Children rated each item on a 3-point scale ranging from 0 (*not true*), 1 (*sometimes*), 2 (*true*). Responses were summed to create a total score; higher scores reflect greater symptoms of depression. A total score ≥ 8 is considered clinically significant and 12 children (31%) met or exceeded the clinical cutoff for child depression. Though the internal consistency for this measure is somewhat low, .71 is above traditionally acceptable levels of internal consistency (see Nunnally & Bernstein, 1994), and other recent studies focused on childhood trauma demonstrate comparable criterion (e.g., $\alpha = .74$; Mendelson et al., 2015).

Active Inhibition Scale (AIS)—Symptoms of avoidant coping were assessed using the 11-item AIS (Ayers, Sandler, & Twohey, 1998), a measure of avoidant coping developed for use with bereaved youth ages 8–16 ($\alpha = .92$). The AIS showed evidence of excellent internal consistency in prior studies of bereaved youth (e.g., Howell et al., 2015). Children rated how often they avoided or suppressed their emotions since the loss of their parent (e.g., “You’ve tried to hide any bad feelings that you’ve had”, “When you’ve been upset, you’ve acted like nothing was wrong”, “When you’ve felt sad, you tried not to let anybody know”) on a 5-point scale ranging from 0 (*never*) to 4 (*a lot*). Items were summed to create a total score; higher scores reflect greater use of avoidant coping strategies. The AIS was not created for diagnostic purposes and does not include a clinical cutoff score; however, the average AIS total score for our sample ($M = 17.97$) was slightly lower than studies that have used the AIS to assess levels of emotional suppression in other samples of children who have experienced adverse life events (e.g., suicide ideation/attempts; Kaplow, Gipson, Horwitz, Burch, & King, 2014).

Parent Perception Inventory (PPI)—Given that the presence or absence of caregiver warmth/positivity in general could potentially influence children’s psychological functioning (e.g., Shapiro, Howell, & Kaplow, 2014), we included children’s perceptions of their caregivers’ warmth/positivity as a control variable. Children reported on their perceptions of positive and negative parental behaviors from the surviving caregiver, including nonverbal affection, positive reinforcement, and positive evaluation ($\alpha = .85$; Hazzard, Christensen, & Margolin, 1983). Consistent with previous studies of bereaved children (e.g., Howell, Shapiro, Layne, & Kaplow, 2015; Sandler et al., 2003), we administered items that reflect the child’s view of their caregiver and family environment since their parent’s death (e.g., “When you completed tasks that your caregiver asked you to do, how often has he/she responded by giving you a hug?”, “How often has your caregiver smiled at you when you’ve done something good?”). Items are rated on a 5-point scale ranging from 0 (*never*) to 4 (*a lot*); higher scores reflect more frequent caregiver positive parenting behaviors. The average

PPI score for our sample ($M = 22.90$) was comparable to other studies that used the PPI to measure children's perceptions of parental behaviors (e.g., Howell et al., 2016).

Beck Depression Inventory (BDI)—Given that the presence or absence of caregiver depressive symptoms might influence youth's psychological or behavioral functioning (Rude, Gortner, & Pennebaker, 2004), we included caregiver depressive symptom scores as a control variable. We assessed caregivers' ($n = 39$) depressive symptoms through the widely-used, 21-item BDI ($\alpha = .91$; Beck, Steer, & Garbin, 1988). Caregivers rated how often they experienced various depressive symptoms (e.g., sadness, worthlessness, guilty feelings) during the last two weeks on a scale of 0 (*never*) to 3 (*quite often*). Items were summed to create a total-scale score; higher scores reflect more depressive symptoms. Nine caregivers (23%) met the clinical cutoff for moderate to severe depression.

Data Analyses

Trained research assistants transcribed children and caregivers' responses verbatim from the 10-minute videotaped discussions. We were specifically interested in mapping hypothesized links between caregivers' verbal (as opposed to nonverbal) communication and their children's psychological functioning, thus we measured caregivers' verbal communication. Applying text analysis procedures of the Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2007), we excluded all inaudible responses as well as clinicians' questions or comments. All discussion transcriptions were checked for spelling errors and non-emotional uses of words such as "like" or "well" were coded as fillers and nonfluencies and not counted as emotion words. The word count for caregivers' portions of the interviews ranged from 42 to 554 words ($M = 188.82$ words, $SD = 114.75$). Pennebaker and colleagues recommend that any text with < 50 words should be treated with skepticism (Pennebaker, Boyd, Jordan, & Blackburn, 2015). In the current sample, three caregivers had word counts < 50 (42, 43 and 49, respectively). Nevertheless, because our findings remained virtually identical when we included only the 36 caregivers with ≥ 50 words, we used the full sample of 39 caregivers.

We analyzed the selected portions of the discussion text using the LIWC program (Pennebaker et al., 2007). The LIWC provides over 80 different psychological and grammatical categories as a percentage of total words and has been extensively validated as a tool to examine the psychological implications of words people use to talk about emotional experiences (Pennebaker, Mehl, & Niederhoffer, 2003) including bereavement and traumatic events (Eggly et al., 2015; Jaeger et al., 2014; Lester, 2012; Pennebaker et al., 1997). The current study focused on positive emotion—a content category linked to mental health in prior studies (e.g., Pennebaker et al., 2003; Rude et al., 2004). A total of 409 words (e.g., happy, laugh, love) were included in the positive emotion category. Below is an example excerpt of a caregiver's discussion with her 9-year-old child who just lost his father (caregiver's positive emotion words are italicized):

Please talk together about your favorite memories of the deceased parent.

"I have lots of memories but I think my *favorite* memory of you and him together would be when you guys were wrestling. That's always a *good*

memory. I have one when you were little. You were such a little *cutie* and you were so *snuggly* you just *loved* to be held by dad, and I always remember you in the backpack. And dad would carry you around everywhere. It was pretty *cool*.”

Please talk together about what (child) has in common with the deceased parent.

“I think you look a lot like dad. I think a lot of you know, how you walk and a lot of the expressions you make remind me a lot of daddy. You both *like* strawberries and blueberries. You have the same hairline, except he didn’t have the freckles. I think your hands are like dad’s hands. I know you both *like* to give me *hugs*. You give me *good hugs*. What about *favorite* foods? You know what else you do whenever you have something on you, you always wipe your hands on your shirt you know that? They are *good* memory shirts.”

Results

Of note, four families had more than one child participate in the study. Because some participants were nested within families, Hierarchical Linear Modeling (HLM) is an ideal method for controlling for each participant’s membership in a family. However, we used the General Linear Model rather than HLM because of concerns regarding our small sample size and limited statistical power (Maas & Hox, 2005; Snijders, 2005). Because all analyses replicated when we had randomly selected one child from families in which multiple children had participated, we included all children in the final analyses.

In light of prior findings that the cause of a parent’s death can be a potent predictor of psychological functioning in bereaved youth (e.g., Howell et al., 2016; Kaplow, Howell, & Layne, 2014), we first conducted independent-samples *t*-tests to examine potential group differences (anticipated vs. sudden caregiver death) among our primary variables of interest. Independent samples *t*-tests demonstrated similar scores in children (anxiety, depression, avoidant coping) and caregivers (depression) across both groups, $t(37) = |1.43|$, $p > .16$.

Table 1 presents descriptive statistics and correlations among primary study variables. On average, 5.5% of caregiver words during the discussion were categorized as positive emotion. As expected—and because the “positive reminiscing” discussion pulled for positive emotion—this percentage exceeds the rates of positive emotion words typically used in clinical and non-clinical samples (~2.7%), including individuals who described deeply emotional experiences (see Pennebaker, Francis, & Booth, 2001, for means across 43 studies). Consistent with prior findings (Kaplow, Shapiro, et al., 2013), children’s symptoms of anxiety, depression, and avoidant coping were positively correlated, suggesting that children’s negative psychological functioning and maladaptive functioning often co-occur. Younger children and females were more likely to report symptoms of anxiety (MASC). Time that had elapsed between the death and study participation (in days) was not correlated with any variable of interest.

The aim of the current study was to examine relations between caregivers' positive emotion words and child self-reported psychological functioning and coping. In particular, we predicted that (a) caregivers' positive emotion words would be significantly and *inversely* related to children's anxiety, depression, and avoidant coping scores (Hypothesis 1), and (b) these associations would be the strongest among cases in which comparatively more time had passed since the parent's death (Hypothesis 2).

To test these hypotheses, we conducted separate linear regressions predicting children's self-reported anxiety, depression, and avoidant coping (see Table 2). For all regressions, predictors in the first model included time (days passed since parent's death) and caregiver's positive emotion language; the second model additionally included the two-way interaction between these variables. Time and caregiver's positive emotion language were centered prior to creating the interaction term as recommended to reduce multicollinearity among predictors (Cohen, Cohen, West, & Aiken, 2003). For all dependent variables, inclusion of the two-way interaction term produced an increase in proportion of variance explained; we thus discuss results of the second model including the interaction term.

We included children's age and gender as statistical controls because adults are more likely to talk about emotions with older children and to use a greater variety of emotion language with girls compared to boys (Kuebli, Butler, & Fivush, 1995). We additionally included children's use of positive emotion words during the interview to test whether caregivers' positive emotion words were related to children's psychological functioning, above and beyond children's own use of emotion words. Children's perceptions of their caregivers' warmth and positive parenting was included as a covariate because previous research suggests that caregivers' nonverbal displays of empathic and supportive communication (e.g., hugging, good eye contact) are inversely related to bereaved children's psychological distress (e.g., Howell, Shapiro, Layne, & Kaplow, 2015; Shapiro, Howell, & Kaplow, 2014). Last, we included caregiver's reported psychological functioning (BDI; depressive symptoms) as a covariate given findings that depression in adulthood is associated with alterations of natural language, including emotion language (Rude et al., 2004), and can relate to children's psychological functioning (Shapiro et al., 2014).

As shown in Table 2, providing strong support for Hypothesis 2, we found a significant interaction between positive emotion words and days since death, such that the predictive effect of caregivers' positive emotion words on child anxiety and depression varied as a function of time elapsed since the death. This same interaction (time $\times$ caregiver's positive emotion words) predicted children's avoidant coping, although the effect was marginal ($p = .10$).

To decompose these interactions, we calculated the simple slopes for each effect using the PROCESS macro for SPSS (Dawson, 2014; Hayes, 2012). Simple slopes were calculated at one standard deviation above and below the means of time since parent's death and caregivers' positive emotion language. These analyses indicated that the inverse associations between caregiver's positive emotion language and children's psychological functioning were significant only for youth for whom more time had elapsed since their parent's death. That is, among cases in which a greater number of days had passed since the death,

caregiver's positive emotion language was inversely associated with children's anxiety, $b = -6.35$, $t = -2.40$, $p = .02$, depression, $b = -1.26$, $t = -2.93$, $p = .01$, and avoidance (marginal), $b = -2.23$, $t = -1.32$, $p = .20$ (see Figures 1, 2, and 3). In contrast, these associations were not significant when fewer days had passed since the death (all b 's > 1.12 , t 's $> .71$, p 's $> .48$).

Further, drawing on the Johnson and Neyman (1936) technique of demarcating significance regions, we calculated the precise number of days needed to have passed before the inverse relation between caregivers' positive emotion language and psychological functioning reached significance. In this sample, the predictive effect of caregivers' positive emotion language reached significance at 103.08 post-loss days in relation to depression and 122.34 post-loss days in relation to children's anxiety. There were no statistically significant transition points for avoidant coping within the observed range of time since death.

Discussion

The aim of the current study was to examine the role of caregivers' language, particularly their use of positive emotion words (e.g., happy, laugh, joy), as a candidate predictor of bereaved children's mental health and coping. Prior research suggests that children who experience warm and empathic interactions with caregivers are less distressed in the aftermath of parental loss (Shapiro et al., 2014). However, prior studies focused primarily on behavioral measures of parenting and did not examine caregivers' use of language—particularly in the context of reminiscing—in relation to children's psychological functioning. We expected caregivers' positive emotion words to be significantly *inversely* related to children's anxiety, depression, and avoidant coping scores. Additionally, we examined whether the relation between caregivers' positive emotion language and bereaved children's psychological functioning varied as a function of time passed since the death, and we hypothesized that these associations would be the strongest among cases in which comparatively more time had passed since the parent's death.

We found a significant main effect of caregivers' positive emotion language on children's symptoms of depression, partially confirming Hypothesis 1. These findings suggest that caregivers' positive emotion words during a reminiscing conversation may be associated with reductions in children's depressive symptoms. Contrary to Hypothesis 1, the main effects of caregivers' positive emotion language on children's anxiety and avoidant coping did not reach significance. Nevertheless, this finding must be considered in light of the significant interactions we identified. Specifically, we found evidence in support of Hypothesis 2 via a significant inverse association between caregivers' positive emotion words and bereaved children's psychological distress, but *only* in children who had lost a parent less recently (at approximately 3.5 months or more). In particular, caregivers' total positive emotion words when discussing memories of the deceased were inversely associated with distress symptoms among children whose parent had died at least 103 days (for depression), and 122 days (for anxiety) before—that is, around 3–4 months prior. However, we did not find a designated time point at which caregivers' positive emotion language was associated with decreased avoidant coping, possibly because the interaction between time and positive emotion language on avoidant coping was marginal ($p = .10$) to begin with.

Additionally, it is possible that avoidant coping is more of a static trait and may not be as malleable (compared to anxiety or depression) with regard to the influence of time.

Consistent with Hypothesis 2, we found an association between parental positive emotion and bereaved children's adjustment. Specifically, we found a significant inverse association between parents' positive emotion and children's psychological distress (measured by reductions in depression and anxiety) that emerged for children who lost a parent at approximately 103 to 122 days (3–4 months) since their participation in our study. One theoretical explanation for this finding is that high caregiver positivity in the first few months following parental loss could induce bereaved children to perceive that typical reactions to the death (including anxiety, depressive symptoms, and avoidance of death-related conversations) are undesirable, unhealthy, or abnormal (see Kaplow et al., 2013). This explanation is consistent with a recent review of the empirical literature that underscored the importance of helping children feel validated in their profound sadness and anxiety in the short-term aftermath of parental death (Kaplow et al., 2012). In addition, a recent study found that youth are more likely to experience psychological distress following parental death when their mothers do not appear sad or depressed (Shapiro et al., 2014). Similarly, results of the current study suggest that parentally bereaved youth may benefit from observing "normative" levels of sadness or distress in parental language and behavior in the first few months following the death, which may then naturally transition over time to more positive language during caregiver-facilitated reminiscing about the deceased parent.

A second, related theoretical explanation for this study's findings is that positive reminiscing may, over time, serve another important function of assisting children in maintaining important memories of the deceased. As time passes, bereaved children may become fearful that they will forget important features of the parent who died or cherished aspects of their relationship (Kaplow, Layne, et al., 2014a, 2014b). For example, a common grief reaction among bereaved children is worry that they will forget distinguishing characteristics, traits, or behaviors of the parent, such as his or her laugh, voice, or fun memories together. This may be due in part to the notion that such memories are all that bereaved children have left of the loved one (Kaplow, Layne, et al., 2014a). Thus, caregiver-facilitated positive reminiscing can help keep the deceased parent's memory alive through sharing stories and images with children. By extension, caregivers' ability to help children maintain positive memories of the deceased may become increasingly important over time, as children begin to worry that they may forget important aspects of the deceased person or the relationship.

Limitations and Future Directions

Study limitations include: (a) The cross-sectional nature of our study design precludes directional or causal inferences given the possibility that better adjusted children have caregivers who tend to express more positive emotion. We thus cannot conclude that caregivers' positive emotion facilitates children's functioning on one hand, or that children's adaptive functioning evokes caregivers' positive emotion and reminiscing on the other. (b) The limited time frame (because we restricted participation to those who had experienced a loss within the last six months) precluded testing for nonlinear effects of positive emotion. For example, it is possible that parents' use of positive emotion is not significantly

associated with outcomes among children who lost a parent a lengthy time ago (e.g., 2 years). (c) Given that this observational study was conducted via semi-structured interview, our findings may not generalize to bereaved children and families in naturalistic settings. Rather, some caregiver positive emotion may have been evoked as a demand characteristic inherent in the assigned interactive exercise and the fact that the exercise was observed by interviewers. (d) The generalizability of study findings was limited given that the majority of children and families were recruited from bereavement support groups in Michigan (i.e., were simultaneously receiving help and support) in which caregivers may have had greater knowledge regarding how to speak with their bereaved youth. In addition, caregivers from other geographic locations may demonstrate different types of support for bereaved children. (e) The small and relatively homogenous nature of our sample (including age of child and relationship to person who died) also restricted our capacity to use more sophisticated analyses and to generalize findings to more diverse populations of bereaved children. (f) Last, our finding that caregivers' use of positive emotion words is associated with children's psychological functioning could also be explained by caregivers' nonverbal behaviors rather than positive emotion words. Although we did control for children's perceptions of their caregivers' warmth and nonverbal positive parenting behaviors, these were measures of general nonverbal behaviors that were administered prior to the caregiver-child interview and not during the interview. It is possible that caregivers who used more positive emotion words may have been more likely to display warm and caring (nonverbal) behaviors toward their children in general, and that these behaviors could instead have accounted for the inverse association between positive emotion words and children's anxiety, depression, and avoidant coping.

Future investigations may benefit from longitudinal study designs that examine links between caregivers' language and children's outcomes over time. Such studies carry promise for shedding light on temporal and directional links between associations and thereby strengthening causal inference. In addition, the use of longitudinal designs that follow bereaved youth over extended periods can help to clarify the potential duration of effects of parents' positive emotion. Further, studies that examine children's verbal expression of positive or negative emotion in relation to parental expression of emotion can help to clarify potential reciprocal relations between parent-child reminiscing. Finally, studies that simultaneously evaluate and statistically model caregivers' verbal *and* behavioral expressions of emotion can help to clarify the most potent predictors of children's psychological adjustment in the aftermath of parental loss.

Acknowledgments

We thank Michelle Belke, Alena Grieser, Heather Hammerstrom, Harriett Jones, Georgia Stamatopoulos, and Amanda Tarantowski for their assistance with conducting interviews as well as the Gilda's Club of Grand Rapids staff for their support. We also wish to thank Amanda Burnside, Hayley Goldenthal, and Emilie Lerner for their assistance with project coordination. Additionally, we greatly appreciate the help of Monica Arkin, Jerri Bamberger, Damia December, Valerie Elsesser, Joanna Gross, Kara Koppinger, Madison Kraus, Mirele Mann, Meredith Merlanti, Maggie O'Reilly Treter, Megan Ramthun, Michael Shain, and Hannah Wolfson for their assistance with data management and data entry. We are especially grateful to all participating families who shared their stories with us.

This article was based on work supported in part by grant NIMH (K08 MH76078), the Michigan Institute for Clinical and Health Research Grant, the Todd Ouida Clinical Scholars Award, the Rachel Upjohn Clinical Scholars

Award, the Laurence Polatsch Memorial Fund, and the Lynn Wilson Memorial Fund – Dr. Julie Kaplow received these awards and funds. Britney Wardecker is partially supported by National Institute on Aging Grant T32 AG049676 to The Pennsylvania State University.

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Figure 1. The interaction between time (days) since parent's death and caregiver's positive emotion in predicting children's symptoms of anxiety

Higher scores on these measures indicate poorer psychological health. Following procedures recommended by Cohen et al. (2003), regression lines are plotted at one standard deviation above and below the means of time since parent's death and caregivers' positive emotion language. $*p .05$, $**p .01$.

Figure 2. The interaction between time (days) since parent's death and caregiver's positive emotion in predicting children's symptoms of depression

Higher scores on these measures indicate poorer psychological health. Following procedures recommended by Cohen et al. (2003), regression lines are plotted at one standard deviation above and below the means of time since parent's death and caregivers' positive emotion language. $*p < .05$, $**p < .01$.

Figure 3. The interaction between time (days) since parent's death and caregiver's positive emotion in predicting children's symptoms of avoidant coping
Higher scores on these measures indicate poorer psychological health. Following procedures recommended by Cohen et al. (2003), regression lines are plotted at one standard deviation above and below the means of time since parent's death and caregivers' positive emotion language. * p .05, ** p .01.

Table 1

Descriptive Statistics and Correlations Among Primary Study Variables

	1	2	3	4	5	6	7
1. Caregiver's positive emotion words	–						
2. Child's anxiety symptoms	–.10	–					
3. Child's depressive symptoms	–.23	.78**	–				
4. Child's avoidant coping	–.14	.61**	.60**	–			
5. Time since parent's death	–.21	–.03	.07	.17	–		
6. Child's age	–.04	–.33*	–.17	–.08	.08	–	
7. Child's gender	.02	–.37*	–.30	.01	.20	.30	–
<i>M</i>	5.50	50.87	5.62	17.97	105.92	9.26	.54
<i>SD</i>	2.74	22.31	3.81	11.39	45.74	2.00	.51

Note. *N* = 39. Time since parent's death (in days); child's age (in years); child's gender (0 = female, 1 = male).

*
p .05,

**
p .01.

Table 2

Regression Analysis Predicting Children's Psychological Functioning

Predictor	Outcome					
	Child's Anxiety Symptoms		Child's Depressive Symptoms		Child's Avoidant Coping	
	<i>R</i> ²	β	<i>R</i> ²	β	<i>R</i> ²	β
Step 1	.25		.22		.20	
Child's age		-.29		-.11		-.08
Child's gender		-.26		-.22		.06
Child's use of positive emotion words		.20		.11		.00
Child's perceptions of parenting behaviors		-.12		-.26		-.29
Caregiver's depression		.13		.08		.28
Time since parent's death		-.02		.04		.06
Caregiver's positive emotion words		-.16		-.22		-.09
Step 2	.13 [*]		.16 [*]		.06	
Child's age		-.17		.03		.00
Child's gender		-.33		-.30		.00
Child's use of positive emotion words		.24		.16		.03
Child's perceptions of parenting behaviors		-.06		-.19		-.25
Caregiver's depression		.14		.09		.29
Time since parent's death		-.17		-.12		-.05
Caregiver's positive emotion words		-.28		-.36 [*]		-.18
Time $\times$ caregiver's positive emotion words		-.42 [*]		-.47 ^{**}		-.30
Total <i>R</i>²		.38[*]		.38[*]		.26

Note. *N* = 39. Time since parent's death (in days); child's age (in years); child's gender (0 = female, 1 = male).

^{*} *p* .05.