

## Original Article

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# Bereavement guilt among young adults impacted by caregivers' cancer: Associations with attachment style, experiential avoidance, and psychological flexibility

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**Abstract**

**Objectives.** This paper focuses on the experiences of bereavement guilt among young adults bereaved by a caregiver's cancer, examining associations with attachment style, experiential avoidance, and psychological flexibility with the aim of informing psychosocial interventions for this population.

**Methods.** Ninety-seven young adults (18–25 years) bereaved by a parent/guardian's cancer completed an online survey, including measures of bereavement guilt, attachment style, experiential avoidance, and psychological flexibility. Mediation analyses explored the associations between attachment style (anxious, avoidant) and bereavement guilt, and if these associations were mediated by experiential avoidance or psychological flexibility.

**Results.** Bereavement guilt was significantly positively associated with anxious, but not avoidant, attachment to the deceased; the relationship between anxious attachment and bereavement guilt was partially mediated by experiential avoidance. Bereavement guilt was also negatively associated with psychological flexibility and engagement with bereavement counseling.

**Significance of results.** Given the limited literature on cancer-related bereavement in young adulthood, this study offers important theoretical and clinical insights into factors associated with more complex aspects of grief in this population. Specifically, this work identified that anxious attachment is associated with ongoing bereavement complications in the years following the death of a caregiver to cancer, with experiential avoidance partially mediating this relationship. While further research is needed to better understand the interaction between these factors and other related constructs, such as psychological flexibility, these findings may be helpful in selecting therapeutic approaches to use with this population.

**Introduction**

Cancer is a leading cause of death in developed countries (Sung et al. 2021), with annual cancer deaths projected to reach 17 million worldwide by 2030 (Boyle and Levin 2008). Bereaved relatives typically experience physical, emotional, and cognitive responses to the death, known as *grief* (Zisook and Shear 2009). This often involves distress (Kim et al. 2013; Oechsle et al. 2020) and guilt (*bereavement guilt*; Joa and Newberg 2023; Li et al. 2014); some bereaved relatives also experience prolonged and complicated grief reactions (Zordan et al. 2019). For young adults (18–25 years) bereaved by a caregiver's cancer, the co-occurrence of bereavement with developmental shifts (e.g. moving out, educational/career progression) present unique challenges, particularly if coping skills and flexibility are still evolving (Asselmann et al. 2015; Ing et al. 2019; Karlsson et al. 2013). However, the experiences and needs of this population remain relatively understudied (Herberman Mash et al. 2014; Kim et al. 2013), and potential intervention strategies and programs are similarly lacking (Ing et al. 2019). This paper focuses on the experiences of bereavement guilt among young adults bereaved by caregivers' cancer, examining associations with attachment style, experiential avoidance, and psychological flexibility with the aim of informing psychosocial interventions for this population.

**Young people's experiences of bereavement**

The death of a close relative is one of the most traumatic events a young person can experience (Stoppelbein and Greening 2000); cancer-related deaths may carry additional

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psychosocial burden from witnessing a potentially protracted and traumatic period of illness and decline, and associated anticipatory grief (Hoffmann et al. 2018; Zordan et al. 2019). This is complicated by disrupted family communication and dynamics before and after bereavement, with families reporting uncertainty about if and how to discuss impending death, leaving young people unaware of or not expecting the death and still reconstructing the narrative of illness and loss years later (Lundberg et al. 2018; Semple et al. 2021; Varathakeyan et al. 2017). While some studies evidence that young people bereaved by parental cancer are resilient and adjust to their loss (Angelhoff et al. 2021; Hoffmann et al. 2018), other work has indicated poor family cohesion (Birgisdóttir et al. 2019), higher rates of self-injury (Bylund-Grenklo et al. 2013), poorer self-esteem, depression, anxiety, and persistent unresolved grief (Bylund-Grenklo et al. 2016; Lundberg et al. 2018) following bereavement. Bereaved offspring report unmet needs for support and understanding from friends, family, educators, and those with similar experiences; help coping with feelings; time out or distraction; space and time to grieve; and help managing changing household responsibilities (McDonald et al. 2020; Patterson and Ranganathan 2010). These unmet needs are associated with greater distress (McDonald et al. 2020). The psychosocial vulnerabilities of bereaved young people suggest a need for further research on factors associated with adjustment to bereavement to inform support services.

### Grief and bereavement

The dual process model proposes that following bereavement, individuals oscillate between loss-oriented and restoration-oriented coping strategies (Stroebe and Schut 1999). Loss-oriented strategies focus on thoughts and feelings about the loss, while restoration-oriented coping describes the process of adaptation to the death, including stressors such as role and identity changes (Fiore 2021). Oscillation between loss- and restoration-oriented states is thought to facilitate a more adaptive grieving experience; by contrast, complicated grief symptoms (including prolonged grief disorder and post-traumatic stress disorder) arise when individuals do not oscillate between states, or when this oscillation is disturbed (Burton et al. 2012; Stroebe et al. 2005). The ability to oscillate between approaches can be understood in terms of psychological flexibility, which allows individuals to adjust their cognitions and behaviors to adapt to situational demands (Kashdan and Rottenberg 2010; Landstra et al. 2013). It may also be affected by factors relating to the bereaved person's attachment and coping responses.

*Bereavement guilt* is defined as “a remorseful emotional reaction in grieving, with the recognition of having failed to live up to one's own inner standards and expectations in relationship to the deceased and/or the death” (Li et al. 2014, p. 166). Guilt may center on the inability to prevent the death (responsibility guilt), hurting the deceased or their relationship, or living or enjoying life post-bereavement (survivor guilt; (Li et al. 2019). Bereavement guilt has been estimated to affect anywhere between 7 and 90% of bereaved individuals; most studies estimating prevalence between 30 and 60% (Stroebe et al. 2014). These feelings are hypothesized to interfere with the grieving process by distracting the bereaved individual from confronting the reality of their loss (i.e. *experiential avoidance*; Camacho et al. 2018; Eisma et al. 2013), or being difficult to resolve, particularly if guilt relates to a transgression against the deceased (Camacho et al. 2018; LeBlanc et al. 2020).

Accordingly, bereavement guilt is associated with complicated grief and poorer adjustment to loss (LeBlanc et al. 2020; Li et al. 2014, 2019; Stroebe et al. 2014). While previous research was not specific to young people or cancer-related bereavements, psychosocial workers supporting young people bereaved by parental cancer at Canteen Australia (a community support organization for young people impacted by cancer) have observed that bereavement guilt appeared associated with more complicated grief responses, inhibited processing of the loss, and slower therapeutic progress. It is therefore important to examine factors related to bereavement guilt to better understand this response and guide therapeutic interventions for this population.

### Attachment

Bowlby (1969) and Ainsworth (1989) define attachment as the deep, long-term connection between a child and their parent/guardian, which guides their beliefs and subsequent relationship formation. Attachment style (e.g. secure, avoidant, anxious) is proposed to shape individuals' response to bereavement, particularly regarding the loss of their attachment figure. For example, avoidant attachment is characterized by a lack of trust in others, compulsive independence, and tendency to avoid attachment-related emotions; following bereavement, these individuals are likely to suppress grief in favor of restoration-oriented actions (Stroebe et al. 2005). By contrast, anxiously attached individuals experience difficulty coping with attachment-related feelings, and tend to be loss-oriented, preoccupied and emotional in bereavement (Stroebe et al. 2005). Both avoidant and anxiously attached individuals thus show less psychological flexibility than securely attached individuals (Cohen and Katz 2015), impeding oscillation between grief processes. Consequently, both attachment styles are associated with complicated grief reactions (Boelen and Klugkist 2011; Ho et al. 2013; Meier et al. 2013; Russ et al. 2022; Scheidt et al. 2012; Schenck et al. 2016; Wijngaards-de Meij et al. 2007), including greater guilt following bereavement (Cohen and Katz 2015; Waskowic and Chartier 2003).

### Experiential avoidance

Following bereavement, avoidance may support functioning by facilitating the processing of painful information about the loss and restoring capacity to pursue life satisfaction (Shear 2010). However, longer-term avoidance is thought to impede acceptance of the loss (Shear 2010; Shear et al. 2007), stalling the bereaved individual in the loss-oriented stage of coping and impeding restorative processes. Experiential avoidance predicts complicated and prolonged grief among bereaved adults (Nam 2016; Shear et al. 2007), including parentally bereaved young adults (Murrell et al. 2018). Avoidance behaviors have also been identified as a core process mediating the relationship between individual risk factors (such as attachment style) and the development of complicated grief (Boelen and Klugkist 2011; Boelen et al. 2006; Eisma et al. 2013). For example, insecurely attached individuals are thought to have more difficulties integrating and processing the loss and engage in avoidance behaviors to cope, which impedes their adaptation to the loss (Boelen and Klugkist 2011).

### Psychological flexibility

Psychological flexibility describes the individual's capacity to be open to and accepting of difficult internal experiences

(thoughts/feelings), and to respond flexibly to different situational demands by shifting thinking patterns, behavior, and coping strategies (Kashdan and Rottenberg 2010; Landstra et al. 2013). It is associated with psychological well-being (Kashdan et al. 2006; Kashdan and Rottenberg 2010), and is also thought to influence adjustment to bereavement (Burton et al. 2012) by helping individuals shift between loss- and restoration-oriented coping. Consequently, individuals with low psychological flexibility are more likely to report self-judgement about their grief and engage in avoidance- or suppression-based coping strategies (Bonanno et al. 2004; Stroebe and Schut 1999). Similarly, those who do not flexibly apply coping strategies are more likely to experience complicated grief and bereavement guilt (Prigerson and Jacobs 2001; Schenck et al. 2016; Simon 2012). Conversely, flexible coping is associated with milder grief reactions and improved adjustment to bereavement, including meaning making and accessing social support (Cohen and Katz 2015). Psychological flexibility may also mediate the relationship between attachment and bereavement outcomes: securely attached adults reported greater flexibility, which was associated with less grief and higher post-traumatic growth, after the death of a sibling (Cohen and Katz 2015).

### Present study

Previous literature suggests that insecure attachments, experiential avoidance, and low psychological flexibility may contribute to bereaved adults' vulnerability to developing complicated grief reactions. However, it is unclear to what extent findings from studies of middle to older adults will generalize to younger adults who have lost an attachment figure, who may still be developing coping abilities and flexibility. Additionally, the role of these processes in contributing to *bereavement guilt* specifically has yet to be investigated. Young adulthood is a particularly interesting developmental stage at which to study guilt, as it seems to mark a transition from largely adaptive guilt in childhood (e.g. as a driver of moral cognitions and behaviors) to the variably mal/adaptive guilt of adulthood (including, but not limited to, bereavement guilt; Luck and Luck-Sikorski 2021). As young adults are typically moving from dependence on childhood attachment figures toward greater independence (Ribar and Wong 2022), the loss of such an attachment figure at this stage may also produce different reactions compared to other ages.

The aim of this study is to examine associations between attachment style, experiential avoidance, psychological flexibility, and bereavement guilt among young adults bereaved by a caregiver's cancer. As previous literature has suggested that experiential avoidance and psychological flexibility may be involved in the relationship between attachment style and bereavement outcomes, we also investigate the potential role of these factors as mediators. Research questions were as follows:

RQ1: Are attachment style (1a), experiential avoidance (1b), and psychological flexibility (1c) related to young adults' experience of bereavement guilt following the death of a caregiver to cancer?

RQ2: Are the effects of attachment style on bereavement guilt mediated by experiential avoidance and psychological flexibility?

Based on previous literature, it was hypothesized that bereavement guilt would be positively associated with anxious attachment, avoidant attachment (RQ1a), and experiential avoidance (RQ1b), and negatively associated with psychological flexibility (RQ1c).

It was additionally hypothesized that the negative relationships between attachment styles and bereavement guilt would be mediated by experiential avoidance and psychological flexibility (RQ2).

## Method

### Study design

Data was collected through an online survey hosted on Qualtrics. After indicating consent to participate, participants completed brief demographic and cancer questions, followed by study measures (ordered as follows: trait guilt, bereavement guilt, attachment style, psychological flexibility, and experiential avoidance). The survey took 20–30 minutes to complete. The study received ethical approval from Macquarie University.

### Participants and recruitment

Participants were recruited to the study via an undergraduate psychology student research pool from an Australian university, and from Canteen Australia (a not-for-profit organization supporting young people impacted by cancer, including young adults bereaved by a parent/guardian's cancer). To be eligible, participants had to: (a) be aged between 18 and 25 years; (b) be fluent in English; (c) have had at least 1 primary caregiver die from cancer; and (d) not be experiencing clinical levels of depression or anxiety. University participants received course credit while Canteen Australia recruits received a \$10 online groceries voucher as compensation for their time.

### Measures

#### Outcome: Bereavement guilt

Bereavement guilt was assessed using the 14-item Bereavement Guilt Scale (Li et al. 2017), covering 5 components: responsibility for death, hurting the deceased, survivor guilt, indebtedness guilt, and guilt feelings. Participants rate items on a 5-point Likert scale (*does not describe me at all–describes me very well*). Total scores range from 14 to 70 (higher scores indicate higher guilt). In this study, the scale had good internal consistency (Cronbach's  $\alpha = .84$ ).

#### Attachment style

The Experience in Close Relationships-Revised questionnaire (Fraley et al. 2000) comprises 2 subscales assessing attachment-related anxiety (18 items; Cronbach's  $\alpha = .89$ ) and avoidance (18 items; Cronbach's  $\alpha = .91$ ). Participants indicate the extent to which statements are characteristic of their relationship with the deceased using a 7-point Likert scale (*disagree strongly–agree strongly*). Total scores range from 18 to 126, with higher scores indicating greater anxiety or avoidance.

#### Experiential avoidance

The 7-item Acceptance and Action Questionnaire II (AAQ-II; Bond et al. 2011) assessed experiential avoidance. Participants rate the extent to which items are true of them on a 7-point scale (*never true–always true*), with total scores ranging from 7 to 49. The AAQ-II had good internal consistency in this study (Cronbach's  $\alpha = .86$ ).

#### Psychological flexibility

The 20-item Psychological Flexibility Questionnaire (PFQ; Ben-Itzhak et al. 2014) assessed psychological flexibility. Participants

rated the extent to which items characterized them on a scale from *disagree strongly* to *agree strongly*. Due to an administrative error, this rating was made using a 7-point scale rather than the originally intended 6-point scale (additional midpoint: *neither agree nor disagree*); however, scale anchors were the same. The PFQ had good internal consistency in this study (Cronbach's  $\alpha = .88$ ).

### Demographics and bereavement characteristics

Participants reported their gender, age, cultural background, relationship status, and education. They also reported which parent/carer had died, time since bereavement, if they lived with the deceased, the impact of the death on their life (1 = *no effect*–5 = *extremely strong effect*), and if they had received counseling or support related to the bereavement (*yes/no*).

### Data cleaning and analysis

All data were downloaded into IBM's Statistical Package for the Social Sciences v.27 (IBM Corp 2020) and checked. Of 131 responses, 35 were excluded due to insufficient measure completion ( $n = 26$ ), being outliers on time since bereavement (greater than 2SD above the sample mean;  $n = 5$ ), or repeat survey completion (only earlier survey retained;  $n = 4$ ). Two participants had small amounts of missing data (1–2 items); these datapoints were imputed using mean substitution.

### Bivariate correlations

Pearson's bivariate correlations explored associations between attachment style, psychological flexibility, experiential avoidance, and bereavement guilt.

### Mediation analyses

A series of mediation analyses were conducted to examine the association between attachment style (anxious, avoidant) and bereavement guilt, and whether these associations were mediated by psychological flexibility and experiential avoidance. Mediation effects were tested separately, given the limited sample size and the correlation between mediator variables (Preacher and Hayes 2008). As perceived impact of bereavement ( $r = .314$ ,  $p < .001$ ) and engagement with bereavement counseling/support ( $r = -.222$ ,  $p = .029$ ) were significantly correlated with bereavement guilt, these factors were included as covariates in the analyses.

## Results

### Participant characteristics

The final dataset included responses from 97 participants; most were female (77%), Caucasian (72%), and born in Australia (85%). Respondents were 20.2 years old (SD = 2.3 years, range: 17–25 years) and 4.1 years post-bereavement (SD = 3.2 years, range: 1 month–12 years), on average. Full demographic details and means for study measures are presented in Table 1.

### Bivariate correlations

Table 2 displays correlations between key study variables. Anxious and avoidant attachment styles were significantly positively correlated with each other; both were negatively correlated with psychological flexibility, and anxious attachment was also positively correlated with experiential avoidance. Bereavement guilt was positively correlated with anxious attachment and experiential avoidance, and negatively correlated with psychological flexibility. Bereavement guilt was not significantly correlated with

**Table 1.** Participant demographics, cancer, and bereavement characteristics

	N
Gender	
Female	75
Male	20
Non-binary	1
Speak a language other than English	
Yes	31
No	66
Cultural background (pick up to 3)	
European, Caucasian, or White	70
Asian	19
Middle Eastern	8
African	2
Hispanic	1
Aboriginal	1
Other	1
Country of birth	
Australia	82
Other	15
Highest completed education	
High school (up to Year 9)	2
High school (up to Year 10–12)	9
High school (graduated)	54
TAFE or other post-high school qualification	15
University – Undergraduate	15
University – Postgraduate	2
Currently studying	
Yes	81
No	16
Relationship with deceased	
Mother/stepmother	37
Father/stepfather	37
Grandparent	11
Sibling	2
Aunt/uncle	2
Other primary carer, not further specified	8
Cancer type	
Lung	16
Breast	14
Brain	12
Colorectal	10
Kidney	6
Lymphoma	5
Pancreatic	5

(Continued)



**Table 1.** (Continued.)

	N
Prostate	5
Unsure	5
Other	19
Impact of death	
Extremely strong effect	33
Quite strong effect	41
Some effect	18
A little effect	3
No effect	2
Received bereavement counseling or support	
Yes	62
No	35

avoidant attachment. Time since bereavement was only significantly associated with avoidant attachment.

### Mediation analyses

Figure 1 presents the path diagram for the mediation; Table 3 summarizes results of these analyses. The effect of anxious attachment on bereavement guilt was significantly mediated by experiential avoidance ( $\beta = .0617$ , 95% CI [.0060, .1554]): anxious attachment was associated with greater experiential avoidance (significant path A), which was in turn associated with greater bereavement guilt (significant path B). The overall association between anxious attachment and bereavement guilt (path C) was significantly altered after accounting for the indirect effect of experiential avoidance (path C') but remained significant, indicating a partial mediation effect. Psychological flexibility did not significantly mediate the association between anxious attachment and bereavement guilt ( $\beta = .0381$ , 95% CI [-.0059, .1115]). Mediation analyses were not run for the association between avoidant attachment

and bereavement guilt, as the bivariate correlation between these variables was not statistically significant.

### Discussion

While many bereaved young adults are able to adapt to the death of a caregiver to cancer (Angelhoff et al. 2021; Hoffmann et al. 2018), a significant proportion experience persistent or complicated grief symptoms (Bylund-Grenklo et al. 2016), including bereavement guilt. Attachment style (Russ et al. 2022), psychological flexibility (Bonanno et al. 2004), and experiential avoidance (Murrell et al. 2018; Shear et al. 2007) have been implicated in shaping bereaved individuals' grief and adaptation to their loss. In this study, bereavement guilt was associated with anxious, but not avoidant attachment to the deceased; additionally, the association between anxious attachment and bereavement guilt was partially mediated by experiential avoidance. While psychological flexibility was not a mediator of the attachment–guilt relationship, it was negatively correlated with bereavement guilt, as was previous engagement with bereavement counseling. These findings offer insights into how bereavement interventions and support can be tailored for young adults experiencing more complicated forms of grief following the loss of a caregiver, particularly where guilt is involved.

Consistent with hypotheses and previous work (Boelen and Klugkist 2011; Cohen and Katz 2015; Meier et al. 2013), anxious attachment was significantly and positively related to bereavement guilt. Bowlby's (1969) attachment theory describes these individuals as investing more heavily and developing greater dependency within their relationships, which may predispose them to more pronounced and intense grief reactions following bereavement (Mikulincer and Shaver 2008; Stroebe and Schut 1999). This may include failure to accept the loss, preoccupation with the bereavement, or maladaptive appraisals about their role in the death of the deceased (a component of bereavement guilt; Mikulincer and Shaver 2008; Stroebe et al. 2005). Accordingly, research has shown that anxiously attached adults experience more complications in bereavement (Delespau et al. 2013; Fraley and Bonnano 2004). The findings from this study indicate the same is true of

**Table 2.** Correlations between study variables

	Bereavement guilt	Experiential avoidance	Psychological flexibility	Avoidant attachment	Anxious attachment	Received counseling or support	Impact of death	Time since bereavement
Time since bereavement	-.166	-.141	.081	-.279**	-.123	.109	.019	-
Impact of death	.314**	.177	.198	-.327***	.025	-.425***	-	
Received counseling or support	-.222*	-.261**	.097	.129	-.063	-		
Anxious attachment	.566***	.273**	-.232*	.474***	-			
Avoidant attachment	.168	.011	-.277**	-				
Psychological flexibility	-.229*	-.285**	-					
Experiential avoidance	.423***	-						
Bereavement guilt	-							

\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ .

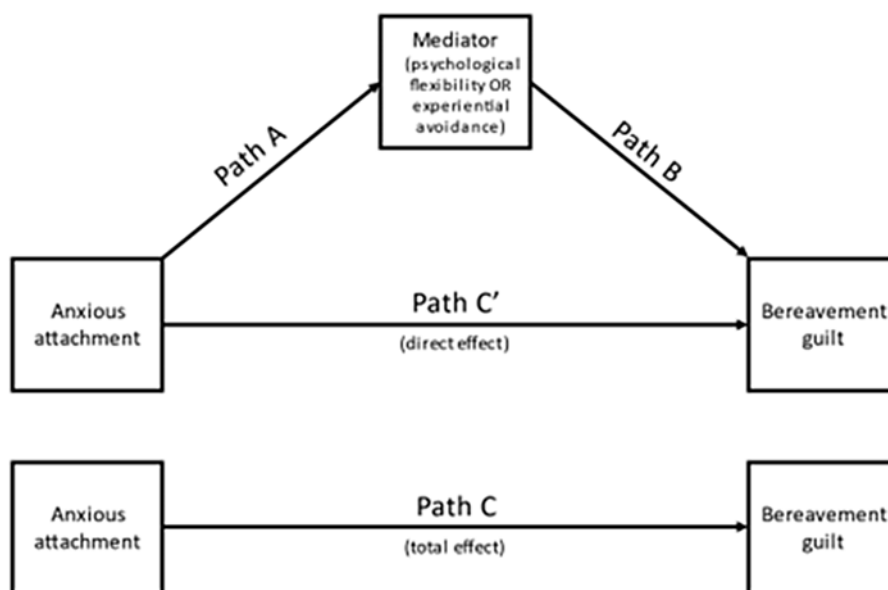


Figure 1. Path diagram for mediation analyses.

Table 3. Mediation of associations between anxious attachment and bereavement guilt

Mediator	Path A $\beta$	Path B $\beta$	Path C' $\beta$	Path C $\beta$
Psychological flexibility	-.226*	-.168*	.516***	.554***
Experiential avoidance	.259**	.238**	.493***	.554***

\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ .

young adults, affirming anxious attachment style as a risk factor for bereavement guilt.

By contrast, avoidant attachment was not significantly associated with bereavement guilt for young adults in this study. Previous studies examining this relationship have also documented mixed evidence (Kho et al. 2015; Mikulincer and Shaver 2008). In fact, 1 study found avoidantly attached individuals reported less intense grief reactions following the death of a romantic partner, as well as more restoration-oriented (i.e. avoidant) strategies (Delespau et al. 2013). This outcome is consistent with attachment theory and the dual process model (Stroebe et al. 2005); the tendency to avoid attachment-related emotions and maintain distance and independence in relationships may protect individuals from more complex manifestations of grief (Stroebe et al. 2005), including bereavement guilt.

As hypothesized based on previous literature (Murrell et al. 2018; Nam 2016; Shear et al. 2007), experiential avoidance was a significant partial mediator of the relationship between anxious attachment and bereavement guilt. While experiential avoidance may help to create emotional distance that is adaptive in the immediate wake of a loss, longer-term experiential avoidance appears to impede acceptance and adjustment to bereavement (Boelen and Klugkist 2011; Shear 2010). For participants in this study, who were on average 4.1 years post-bereavement, the tendency to avoid difficult feelings and thoughts may have obstructed the processing of grief, and was associated with ongoing bereavement guilt, particularly among those who were anxiously attached to the deceased. This may also in part explain why greater time since bereavement was not significantly associated with lower bereavement guilt in

this study. Longitudinal research tracking bereaved young adults in the wake of their loss may help to clarify how these processes unfold over time.

It is perhaps surprising that psychological flexibility did not significantly mediate the anxious attachment–guilt relationship, as hypothesized (Bonanno et al. 2004; Stroebe and Schut 1999) and as was the case for experiential avoidance. The discrepancy between findings regarding psychological flexibility and experiential avoidance is particularly interesting as the experiential avoidance measure (AAQ-II) is often used to assess psychological flexibility (Cherry et al. 2021), although it has been argued to be more indicative of neuroticism and/or negative affect (e.g. Rochefort et al. 2018). Given that psychological flexibility was significantly correlated with both attachment styles and bereavement guilt, and the mediation by psychological flexibility approached significance, this study may have had insufficient statistical power to detect a significant effect. Future work may benefit from extended recruitment periods to ensure that a sufficient sample size can be obtained.

### Clinical implications

This study's findings identify potential risk (anxious attachment, experiential avoidance) and protective (psychological flexibility) factors that are implicated in the occurrence of bereavement guilt, which may be used to tailor supportive interventions for bereaved young adults. For example, psychological flexibility may be enhanced through acceptance and commitment therapy (ACT), which is increasingly applied in psycho-oncology (González-Fernández and Fernández-Rodríguez 2019), including with young adults (Allison et al. 2022; Clarke et al. 2021; Patterson et al. 2022) and end-of-life carers (Davis et al. 2017). ACT-, mindfulness-, and self-compassion-based approaches may also be helpful in reducing experiential avoidance (Arch and Mitchell 2015; Yela et al. 2022). While attachment style tends to be relatively stable over time (Sutton 2019) and may be difficult to alter (particularly as it relates to attachment to the deceased), understanding bereaved young adults' attachment styles may help to tailor interventions to better support their individual needs.

For example, approaches such as interpersonal therapy, complicated grief therapy, and schema therapy have been suggested as potentially helpful approaches for bereaved individuals who are insecurely attached (Schenck *et al.* 2016). However, few psychotherapeutic interventions have been developed for young people bereaved by familial cancer (Ing *et al.* 2019), and more work is needed to develop and evaluate support services for this population. Promisingly, however, participants who had previously accessed bereavement counseling/support reported lower levels of bereavement guilt, suggesting that this outcome may be ameliorated through psychotherapeutic intervention. This is particularly notable given that time since bereavement was not significantly associated with lower bereavement guilt, suggesting that guilt does not necessarily resolve itself over time.

### Strengths, limitations, and future research directions

A key strength of this work was the recruitment of almost 100 young adults bereaved by a caregiver's death to cancer – a population that has historically been difficult to recruit. However, this necessitated including participants who were several years post-bereavement, by which time they may have better adjusted to the loss (regardless of attachment style and coping approach) – although interestingly, bereavement guilt was not significantly correlated with time since bereavement. The study was also underpowered to examine multiple mediators in the same statistical model, as well as to examine potential variations in experiences between subgroups (e.g. genders, relation to the deceased). Given that participants were predominantly Caucasian women, it is also unclear whether these findings would generalize to other demographic groups. The cross-sectional design means that causality cannot be conclusively determined, and further longitudinal research is needed to confirm the relationship between attachment style, experiential avoidance, psychological flexibility, and bereavement guilt. Subsequent work may also benefit from the use of alternative measures of experiential avoidance, given criticisms of the AAQ-II (Cherry *et al.* 2021; Rochefort *et al.* 2018), including measures which can delineate different aspects of experiential avoidance, psychological flexibility, and guilt. Finally, it must be noted that the erroneous inclusion of a seventh, “neither agree nor disagree” response option on the PFQ altered the nature of this scale, and findings drawing from this measure must therefore be interpreted with caution.

### Conclusions

Given the limited literature on cancer-related bereavement in young adulthood, this study offers important theoretical and clinical insights into factors associated with more complex aspects of grief in this population. Specifically, this work identified that anxious attachment is associated with ongoing bereavement complications in the years following the death of a caregiver to cancer, with experiential avoidance partially mediating this relationship. While further research is needed to better understand the interaction between these factors and other related constructs, such as psychological flexibility, these findings may be helpful in selecting therapeutic approaches to use with this population.

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### References

- Ainsworth MS (1989) Attachments beyond infancy. *American Psychologist* 44(4), 709–716. doi:10.1037/0003-066X.44.4.709
- Allison KR, Patterson P, McDonald FEJ, *et al.* (2022) Truce: Feasibility and acceptability of an Acceptance and Commitment Therapy-based intervention for adolescents and young adults impacted by parental cancer. *Journal of Contextual Behavioral Science* 28, 91–101. doi:10.1016/j.jcbs.2023.03.014
- Angelhoff C, Sveen J, Alvariza A, *et al.* (2021) Communication, self-esteem and prolonged grief in parent-adolescent dyads, 1–4 years following the death of a parent to cancer. *European Journal of Oncology Nursing* 50, 101883. doi:10.1016/j.ejon.2020.101883
- Arch JJ and Mitchell JL (2015) An Acceptance and Commitment Therapy (ACT) group intervention for cancer survivors experiencing anxiety at re-entry. *Psychooncology* 25(5), 610–615. doi:10.1002/pon.3890
- Asselmann E, Wittchen H-U, Lieb R, *et al.* (2015) Does low coping efficacy mediate the association between negative life events and incident psychopathology? A prospective-longitudinal community study among adolescents and young adults. *Epidemiology and Psychiatric Sciences* 25(2), 171–180. doi:10.1017/S204579601500013X
- Ben-Itzhak S, Bluvstein I and Maor M (2014) The Psychological Flexibility Questionnaire (PFQ): Development, reliability and validity. *WebMed Central Psychology* 5(4), WMC004606.
- Birgisdóttir D, Bylund-Grenklo T, Kreicbergs U, *et al.* (2019) Losing a parent to cancer as a teenager: Family cohesion in childhood, teenage, and young adulthood as perceived by bereaved and non-bereaved youths. *Psychooncology* 28(9), 1845–1853. doi:10.1002/pon.5163
- Boelen PA and Klugkist I (2011) Cognitive behavioral variables mediate the associations of neuroticism and attachment insecurity with Prolonged Grief Disorder severity. *Anxiety, Stress, & Coping* 24(3), 291–307. doi:10.1080/10615806.2010.527335
- Boelen PA, van den Hout MA and van den Bout J (2006) A cognitive-behavioral conceptualization of complicated grief. *Clinical Psychology* 13, 109–128. doi:10.1111/j.1468-2850.2006.00013.x
- Bonanno GA, Papa A, Lalande K, *et al.* (2004) The importance of being flexible: The ability to both enhance and suppress emotional expression predicts long-term adjustment. *Psychological Science* 15(7), 482–487. doi:10.1111/j.0956-7976.2004.00705.x
- Bond FW, Hayes SC, Baer RA, *et al.* (2011) Preliminary psychometric properties of the Acceptance and Action Questionnaire-II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior Therapy* 42(4), 676–688. doi:10.1016/j.beth.2011.03.007
- Bowlby J (1969) *Attachment and Loss*. New York: Basic Books.
- Boyle P and Levin B (2008) *World Cancer Report 2008*. Lyon, International Agency for Research on Cancer Press.
- Burton CL, Yan OH, Pat-Horenczyk R, *et al.* (2012) Coping flexibility and complicated grief: A comparison of American and Chinese samples. *Depression and Anxiety* 29(1), 16–22. doi:10.1002/da.20888
- Bylund-Grenklo T, Fürst CJ, Nyberg T, *et al.* (2016) Unresolved grief and its consequences. A nationwide follow-up of teenage loss of a parent to cancer 6–9 years earlier. *Supportive Care in Cancer* 24, 3095–3103. doi:10.1007/s00520-016-3118-1
- Bylund-Grenklo T, Kreicbergs U, Hauksdóttir A, *et al.* (2013) Self-injury in teenagers who lost a parent to cancer: A nationwide, population-based, long-term follow-up. *JAMA Pediatrics* 167(2), 133–140. doi:10.1001/jamapediatrics.2013.430
- Camacho D, Pérez-Nieto MÁ and Gordillo F (2018) The role of rumination in the guilt associated with bereavement according to cause of death. *Psychiatry Research* 270, 1053–1058. doi:10.1016/j.psychres.2018.04.065

- Cherry KM, Vander Hoeven E, Patterson TS, et al.** (2021) Defining and measuring “psychological flexibility”: A narrative scoping review of diverse flexibility and rigidity constructs and perspectives. *Clinical Psychology Review* **84**, article 101973. doi:10.1016/j.cpr.2021.101973
- Clarke K, Patterson P, McDonald FEJ, et al.** (2021) The development and process evaluation of a 3-day acceptance and commitment therapy group program for adolescent cancer survivors. *Child and Youth Care Forum* **50**, 229–246. doi:10.1007/s10566-020-09571-4
- Cohen O and Katz M** (2015) Grief and growth of bereaved siblings as related to attachment style and flexibility. *Death Studies* **39**, 158–164. doi:10.1080/07481187.2014.923069
- Davis EL, Deane FP, Lyons GCB, et al.** (2017) Feasibility randomised controlled trial of a self-help acceptance and commitment therapy intervention for grief and psychological distress in carers of palliative care patients. *Journal of Health Psychology* **25**(3), 322–339. doi:10.1177/1359105317715091
- Delespauw E, Ryckebosch-Dayez A-S, Heeren A, et al.** (2013) Attachment and severity of grief: The mediating role of negative appraisal and inflexible coping. *OMEGA - Journal of Death and Dying* **67**(3), 269–289. doi:10.2190/OM.67.3.b
- Eisma MC, Stroebe MS, Schut HAW, et al.** (2013) Avoidance processes mediate the relationship between rumination and symptoms of complicated grief and depression following loss. *Journal of Abnormal Psychology* **122**(4), 961–970. doi:10.1037/a0034051
- Fiore J** (2021) A systematic review of the dual process model of coping with bereavement (1999–2016). *OMEGA - Journal of Death and Dying* **84**(2), 414–458. doi:10.1177/0030222819893139
- Fraley RC and Bonnano GA** (2004) Attachment and loss: A test of three competing models on the association between attachment-related avoidance and adaptation to bereavement. *Personality and Social Psychology Bulletin* **30**(7), 878–890. doi:10.1177/0146167204264289
- Fraley RC, Waller NG and Brennan KA** (2000) An item response theory analysis of self-reported measures of adult attachment. *Journal of Personality and Social Psychology* **78**(2), 350–365. doi:10.1037/0022-3514.78.2.350
- González-Fernández S and Fernández-Rodríguez C** (2019) Acceptance and commitment therapy in cancer: Review of applications and findings. *Behavioral Medicine* **45**(3), 255–269. doi:10.1080/08964289.2018.1452713
- Herberman Mash HB, Fullerton CS, Shear K, et al.** (2014) Complicated grief and depression in young adults: Personality and relationship quality. *Journal of Nervous and Mental Disease* **202**(7), 539–543. doi:10.1097/NMD.000000000000155
- Ho SMY, Chan ISF, Ma EPW, et al.** (2013) Continuing bonds, attachment style, and adjustment in the conjugal bereavement among Hong Kong Chinese. *Death Studies* **37**(3), 248–268. doi:10.1080/07481187.2011.634086
- Hoffmann R, Kaiser J and Kersting A** (2018) Psychosocial outcomes in cancer-bereaved children and adolescents: A systematic review. *Psychooncology* **27**(10), 2327–2338. doi:10.1002/pon.4863
- IBM Corp** (2020) IBM SPSS Statistics for Windows, version 27.0. Armonk, NY, IBM Corp.
- Ing V, Patterson P, Szabo M, et al.** (2019) Interventions available to adolescents and young adults bereaved by familial cancer: A systematic literature review. *BMJ Supportive and Palliative Care* **12**(e5), e632–e640. doi:10.1136/bmjspcare-2019-001959
- Joia B and Newberg AB** (2023) Neuropsychological comparison of guilt and grief: A review of guilt aspects in prolonged grief disorder. *OMEGA - Journal of Death and Dying* **87**(2), 591–613. doi:10.1177/00302228211024111
- Karlsson E, Andersson K and Ahlström H** (2013) Loneliness despite the presence of others – Adolescents’ experiences of having a parent who becomes ill with cancer. *European Journal of Oncology Nursing* **17**(6), 697–703. doi:10.1016/j.ejon.2013.09.005
- Kashdan TB, Barrios V, Forsyth JP, et al.** (2006) Experiential avoidance as a generalized psychological vulnerability: Comparisons with coping and emotion regulation strategies. *Behaviour Research and Therapy* **44**(9), 1301–1320. doi:10.1016/j.brat.2005.10.003
- Kashdan TB and Rottenberg J** (2010) Psychological flexibility as a fundamental aspect of health. *Clinical Psychology Review* **30**(7), 865–878. doi:10.1016/j.cpr.2010.03.001
- Kho Y, Kane RT, Priddis L, et al.** (2015) The nature of attachment relationships and grief responses in older adults: An attachment path model of grief. *PLoS One* **10**(10), e0133703. doi:10.1371/journal.pone.0133703
- Kim Y, Lucette A and Loscalzo M** (2013) Bereavement needs of adults, children, and families after cancer. *The Cancer Journal* **19**(5), 444–457. doi:10.1097/PPO.0b013e3182a5babe
- Landstra JMB, Ciarrochi J, Deane FP, et al.** (2013) Identifying and describing feelings and psychological flexibility predict mental health in men with HIV. *British Journal of Health Psychology* **18**(4), 844–857. doi:10.1111/bjhp.12026
- LeBlanc NJ, Toner ER, O’Day EB, et al.** (2020) Shame, guilt, and pride after loss: Exploring the relationship between moral emotions and psychopathology in bereaved adults. *Journal of Affective Disorders* **263**, 405–412. doi:10.1016/j.jad.2019.11.164
- Li J, Stroebe M, Chan CLW, et al.** (2014) Guilt in bereavement: A review and conceptual framework. *Death Studies* **38**(1-5), 165–171. doi:10.1080/07481187.2012.738770
- Li J, Stroebe M, Chan CLW, et al.** (2017) The Bereavement Guilt Scale: Development and preliminary validation. *OMEGA - Journal of Death and Dying* **75**(2), 166–183. doi:10.1177/0030222815612309
- Li J, Tendeiro JN and Stroebe M** (2019) Guilt in bereavement: Its relationship with complicated grief and depression. *International Journal of Psychology* **54**(4), 454–461. doi:10.1002/ijop.12483
- Luck T and Luck-Sikorski C** (2021) Feelings of guilt in the general adult population: Prevalence and association with depression. *Psychology, Health and Medicine* **26**(9), 1143–1153. doi:10.1080/13548506.2020.1859558
- Lundberg T, Forinder U, Olsson M, et al.** (2018) Bereavement stressors and psychosocial well-being of young adults following the loss of a parent – A cross-sectional survey. *European Journal of Oncology Nursing* **35**, 33–38. doi:10.1016/j.ejon.2018.05.004
- McDonald FEJ, Patterson P and Tindle R** (2020) What young people need when a family member dies of cancer. *Supportive Care in Cancer* **28**, 1631–1638. doi:10.1007/s00520-019-04973-0
- Meier AM, Carr DR, Currier JM, et al.** (2013) Attachment anxiety and avoidance in coping with bereavement: Two studies. *Journal of Social and Clinical Psychology* **32**(3), 315–334. doi:10.1521/jscp.2013.32.3.315
- Mikulincer M and Shaver PR** (2008) An attachment perspective on bereavement. In Stroebe MS, Hansson RO, Schut H and Stroebe W (eds), *Handbook of Bereavement Research and Practice: Advances in Theory and Intervention*. Washington, DC: American Psychological Association, 87–112.
- Murrell AR, Jackson R, Lester EG, et al.** (2018) Psychological flexibility and resilience in parentally bereaved college students. *OMEGA - Journal of Death and Dying* **76**(3), 207–226. doi:10.1177/0030222817693154
- Nam I** (2016) Suicide bereavement and complicated grief: Experiential avoidance as a mediating mechanism. *Journal of Loss and Trauma* **21**(4), 325–334. doi:10.1080/15325024.2015.1067099
- Oechsle K, Ullrich A, Marx G, et al.** (2020) Prevalence and predictors of distress, anxiety, depression, and quality of life in bereaved family caregivers of patients with advanced cancer. *American Journal of Hospice & Palliative Medicine* **37**(3), 201–213. doi:10.1177/1049909119872755
- Patterson P, McDonald FEJ, Bibby H, et al.** (2022) What helps distressed Australian adolescents impacted by cancer? Mechanisms of improvement of the PEER program. *Health and Social Care in the Community* Manuscript under review. doi:10.1111/hsc.13873
- Patterson P and Ranganathan A** (2010) Losing a parent to cancer: A preliminary investigation into the needs of adolescents and young adults. *Palliative and Supportive Care* **8**, 255–265. doi:10.1017/S1478951510000052
- Preacher KJ and Hayes AF** (2008) Asymptomatic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods* **40**, 879–891. doi:10.3758/BRM.40.3.879
- Prigerson HO and Jacobs SC** (2001) Traumatic grief as a distinct disorder: A rationale, consensus criteria, and a preliminary empirical test. In Stroebe MS, Hansson RO, Stroebe W and Schut H (eds), *Handbook of Bereavement Research: Consequences, Coping, and Care*. American Psychological Association, 613–645.
- Ribar DC and Wong C** (2022) Emerging adulthood in Australia: How is this stage lived? In Baxter J, Lam J, Povey J, Lee R and Zubrick SR (eds), *Family Dynamics over the Life Course*. Cham: Springer, 157–175.



- Rochefort C, Baldwin AS and Chmielewski M** (2018) Experiential avoidance: An examination of the construct validity of the AAQ-II and MEAQ. *Behavior Therapy* **49**(3), 435–449. doi:10.1016/j.beth.2017.08.008
- Russ V, Stopa L, Sivyer K, et al.** (2022) The relationship between adult attachment and complicated grief: A systematic review. *OMEGA - Journal of Death and Dying* Advance online publication. doi:10.1177/00302228221083110
- Scheidt CE, Hasenburg A, Kunze M, et al.** (2012) Are individual differences of attachment predicting bereavement outcome after perinatal loss? A prospective cohort study. *Journal of Psychosomatic Research* **73**(5), 375–382. doi:10.1016/j.jpsychores.2012.08.017
- Schenck LK, Eberle KM and Rings JA** (2016) Insecure attachment styles and complicated grief severity: Applying what we know to inform future directions. *OMEGA - Journal of Death and Dying* **73**(3), 231–249. doi:10.1177/0030222815576124
- Simple CJ, McCaughan E, Beck ER, et al.** (2021) 'Living in parallel worlds' – Bereaved parents' experience of family life when a parent with dependent children is at end of life from cancer: A qualitative study. *Palliative Medicine* **35**(5), 933–942. doi:10.1177/02692163211001719
- Shear K, Monk T, Houck P, et al.** (2007) An attachment-based model of complicated grief including the role of avoidance. *European Archives of Psychiatry and Clinical Neuroscience* **257**, 453–461. doi:10.1007/s00406-007-0745-z
- Shear MK** (2010) Exploring the role of experiential avoidance from the perspective of attachment theory and the dual process model. *OMEGA - Journal of Death and Dying* **61**(4), 357–369. doi:10.2190/OM.61.4.f
- Simon NM** (2012) Is complicated grief a post-loss stress disorder? *Depression and Anxiety* **29**(7), 541–544. doi:10.1002/da.21979
- Stoppelbein L and Greening L** (2000) Posttraumatic stress symptoms in parentally bereaved children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry* **39**(9), 1112–1119. doi:10.1097/00004583-200009000-00010
- Stroebe M and Schut H** (1999) The dual process model of coping with bereavement: Rationale and description. *Death Studies* **223**(3), 197–224. doi:10.1080/074811899201046
- Stroebe M, Schut H and Stroebe W** (2005) Attachment in coping with bereavement: A theoretical integration. *Review of General Psychology* **9**(1), 48–66. doi:10.1037/1089-2680.9.1.48
- Stroebe M, Stroebe W, van de Shoot R, et al.** (2014) Guilt in bereavement: The role of self-blame and coping with loss. *PLoS One* **9**(5), e96606. doi:10.1371/journal.pone.0096606
- Sung H, Ferlay J, Siegel RL, et al.** (2021) Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians* **71**(3), 209–249. doi:10.3322/caac.21660
- Sutton TE** (2019) Review of attachment theory: Familial predictors, continuity and change, and intrapersonal and relational outcomes. *Marriage and Family Review* **55**(1), 1–22. doi:10.1080/01494929.2018.1458001
- Varathakeyan A, McDonald FEJ, Patterson P, et al.** (2017) Accessing support before or after a parent dies from cancer and young people's current wellbeing. *Supportive Care in Cancer* **26**, 797–805. doi:10.1007/s00520-017-3891-5
- Waskowic TD and Chartier BM** (2003) Attachment and the experience of grief following the loss of a spouse. *OMEGA - Journal of Death and Dying* **47**(1), 77–91. doi:10.2190/0CMC-GYP5-N3QH-WEH4
- Wijngaards-de Meij L, Stroebe M, Schut H, et al.** (2007) Patterns of attachment and parents' adjustment to the death of their child. *Personality and Social Psychology Bulletin* **33**, 537–548. doi:10.1177/0146167206297400
- Yela JR, Crego A, Buz J, et al.** (2022) Reductions in experiential avoidance explain changes in anxiety, depression and well-being after a mindfulness and self-compassion (MSC) training. *Psychology and Psychotherapy: Theory, Research and Practice* **95**, 402–422. doi:10.1111/papt.12375
- Zisook S and Shear K** (2009) Grief and bereavement: What psychiatrists need to know. *World Psychiatry: Official Journal of the World Psychiatric Association (WPA)* **8**(2), 67–74. doi:10.1002/j.2051-5545.2009.tb00217.x
- Zordan RD, Bell ML, Price M, et al.** (2019) Long-term prevalence and predictors of prolonged grief disorder amongst bereaved cancer caregivers: A cohort study. *Palliative and Supportive Care* **17**, 507–514. doi:10.1017/S1478951518001013