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Narrating the nadir: examining personal and vicarious stories of cancer-related low points among survivors and romantic partners

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ABSTRACT

Objective: To investigate low point autobiographical narratives among cancer survivors and romantic partners.
Design: Cancer survivors (Study 1) and romantic partners (Study 2) narrated the low points of their cancer experiences. Partners also narrated stories of cancer survivors' low points. Narratives were coded for their manifest content, as well as redemption (negative-to-positive arc), contamination (positive-to-negative arc), and tone (positive or negative valence).
Main Outcome Measures: Self-reported measures of health and well-being (life satisfaction, cancer-related worry, impact of cancer).
Results: The diagnosis moment was the most frequently recognised low point among survivors and partners. Survivors who narrated contaminated low points reported marginally less somatisation, salience of cancer recurrence, and that cancer had a marginally less positive impact, relative to survivors whose narratives did not contain contamination. Tone in partners' low points predicted marginally less worry and more somatisation. The tone of their vicarious low points negatively correlated with anxiety.
Conclusion: This research contributes to the growing body of work examining, and giving voice to, the experiences of cancer survivors and those close to them. As such, it informs applied health researchers of potentially challenging cancer-related experiences, and the way(s) in which the storying of these experiences align with psychological flourishing.

Cancer is not an isolated experience with a distinct trajectory, but rather an ongoing illness that permeates one's life, manifesting in various ways. This illness is characterised by physical symptoms, uncertainty, and psychological distress (Koch et al., 2013; Mitchell et al., 2011, 2013; Wu & Harden, 2015). We contend that people gradually craft a 'cancer survivor' identity (Deimling et al., 2007; Park et al., 2009; Zebrack, 2000) by tailoring their cancer *story* to fit their experiences (Little et al., 2002). As such, it is

important to understand how the emotional experience of cancer becomes integrated into one's sense of self, as individuals make sense of, and come to terms with, their lives following diagnosis and treatment. In the present paper, we broadly define the term 'survivor' as individuals living after a diagnosis of cancer and after active treatment has ended (Deimling et al., 2007; Little et al., 2002).

In the present studies, we applied a narrative identity approach (see Bühler & Dunlop, 2019) to the study of cancer survivorship by examining cancer-related low point memories from three perspectives: cancer survivors, survivors' romantic partners (a set of romantic partners separate from the original sample of survivors), and romantic partners' vicarious accounts (see Thomsen & Pillemer, 2017 of survivors' experience). The present work had three objectives. First, we sought to identify the events survivors and partners recognised as the low point of their cancer experiences. Second, we determined whether partners' perceptions of survivors' low points aligned with reports of a separate sample of survivors. Finally, we examined whether differences in the affective characteristics (e.g. redemption, contamination, and tone) of these low points corresponded with participants' health and well-being. This research stands to contribute to knowledge regarding the most challenging events in the fight against cancer, from the perspective of survivors and partners, and an as-yet unconsidered predictor of health and well-being among romantic partners of cancer survivors.

The psychology of cancer

Over 15.5 million cancer survivors resided in the United States as of 2016, and this number is projected to grow to 20 million in less than 10 years (Miller et al., 2016). Due to the prevalence of cancer, the medical adversity associated with this illness has been studied extensively. Moreover, the psychosocial effect of cancer survivorship has gained considerable attention. This body of work has revealed some of the negative emotional effects associated with having cancer (Harrington et al., 2010; Koch et al., 2013; Mitchell et al., 2011, 2013), and the factors influencing psychosocial adjustment after cancer (Wu & Harden, 2015). Cancer survivors experience high levels of psychological distress, commonly characterised by feelings of uncertainty, depression, and anxiety (Harrington et al., 2010; Koch et al., 2013; Mitchell et al., 2011, 2013).

One reason cancer has such a substantial psychological impact on survivors is that the diagnosis, treatment, and recovery can, and often does, challenge one's sense of self and self-worth (Miller & Caughlin, 2013). Cancer challenges sufferers' sense of self because the illness often interferes with one's ability to fulfill social roles and societal norms. Survivors must reconcile their conceptions of an ideal, healthy self with their lived experiences of illness and ever-changing physical, emotional, and social capabilities (Harwood & Sparks, 2003; Miller & Caughlin, 2013; Zebrack, 2000). The acceptance of a new 'cancer survivor' identity could be a positive change in the self, associated with views of oneself as strong and victorious – or it could be a burden, associated with weakness and worries about one's future (Bellizzi & Blank, 2007; Deimling et al., 2007; Kaiser, 2008).

In addition to establishing the existence of a challenging relationship between cancer and the self, researchers have identified themes and stages inherent to

survivorship via accounts from survivors. For example, Mullan (1985) designated stages or 'seasons' of survival (acute, extended, and permanent survival). Similarly, Frank (1995) recognised three categories of illness narratives: (a) restitution narratives (returning to one's state of health prior to illness), (b) chaos narratives (incoherence due to a lack of control over life events), and (c) quest narratives (illness is considered a spiritual journey).

Evident from the aforementioned research, a purely qualitative approach to the study of cancer survivorship has much to offer. Indeed, this influential body of work has allowed researchers to engage with the nuances of qualitative data and has contributed to understanding the dynamic content of individuals' lives. Among other benefits, this perspective has informed theory generation on complementary approaches to analyzing such rich responses and is integral to the approach described here (e.g. Comaroff & Maguire, 1981; Jain, 2013; Segal, 2012). Distinct from more sociological approaches to the study of lived experience is the narrative identity approach (Adler et al., 2017; Bühler & Dunlop, 2019).

The narrative identity approach

Narrative identity culminates in the coherent integration of an individual's past, present, and anticipated future into a single, story-based framework (McAdams, 1995, 2013; Singer, 2004). The process of constructing a narrative identity begins in young adulthood, when individuals are tasked with making sense of personal experiences in relation to their broader life course (Habermas & Bluck, 2000). Over time, narrative identity develops as past experiences are reinterpreted and new significant experiences are incorporated into one's evolving story of the self.

The narratives collected from this approach are viewed as psychosocial constructions that provide insight into identity, capturing the process by which people make sense of themselves and their world through time (McLean et al., 2007). The stories individuals tell about their lives reflect the self in context; narratives are highly contextualised, dynamic illustrations of individuals' personal experiences (Adler et al., 2017; McLean et al., 2007). Narratives illuminate features of individuals' lived experiences (e.g. subjective interpretations of events), internal states (e.g. goals, emotions) and external sociocultural contexts (e.g. audience, cultural influences).

The narrative identity framework is distinguishable from previous qualitative work in at least two ways. First, from a narrative identity perspective, people are considered to have an internal and evolving life story (McAdams, 1995; Singer, 2004). Through the construction of this story, narrators integrate their personal past, present, and future, thereby providing themselves with a sense of meaning, purpose, and direction. In contrast, much of the sociological research on cancer survivorship is agnostic to the existence of such a definitional identity (e.g. Frank, 1995). Second, where researchers such as Frank (1995) work exclusively within a qualitative paradigm, those informed by a narrative identity approach typically work to quantify thematic features of qualitative material. Thus, these researchers often find themselves functioning within an idiographic-nomothetic research paradigm. This work is idiographic insofar as individuals' qualitative passages represent the central focus, but it is nomothetic in that these

responses are quantified and then compared using validated narrative themes. This approach facilitates both the standardised comparison of themes and exploration of relations between themes and non-narrative constructs such as health and psychological adjustment. Complementary to the purely qualitative approach outlined above, this more quantitative approach can, in many cases, offer unique insights into the stories told by certain people that allow for inferences about the broader population (Adler et al., 2017; Dunlop & Tracy, 2013; McLean & Fournier, 2008; Pals, 2006). The idiographic-nomothetic approach allows for the exploration of new ideas and reveals idiographic complexities, while quantifying the narratives using validated themes to make reliable (statistical) inferences.

Assessing narrative identity

The narrative identity approach contains both theory and methodology (Bühler & Dunlop, 2019). The theory indicates that the stories people construct about their lives represent our identities, revealing intersections with one's social world (McAdams, 1995). Methodologically, the assessment of narrative identity involves prompting participants for significant autobiographical scenes, such as high points, low points, and turning points, either in the context of a semi-structured interview or a written or computer-mediated questionnaire (Adler et al., 2017; Cox & McAdams, 2014; McAdams, 2008). Participants' narratives are then quantified via thematic coding of various features.

Among the numerous features that manifest within narratives, affective characteristics have been especially indicative of individuals' psychological functioning. Individual differences in the affective features of narrative identity are associated with several important indicators including well-being and health behaviors (Adler et al., 2015, 2016; Bauer et al., 2005; Dunlop et al., 2013; McAdams et al., 1997, 2001). In a recent conceptual review, Adler et al. (2017) proposed that the affective characteristics of participants' stories can be operationalised in terms of redemption, contamination, and affective tone. Redemption refers to a narrative sequence that moves from negative to positive. Growth is a common example of redemption and includes instances wherein illness leads to psychological or interpersonal progress. In contrast, contamination refers to a narrative sequence that moves from positive to negative. Failure is a common example of contamination, wherein a positive event or emotion becomes spoiled by a negative outcome. Affective tone describes the overall emotional valence of a narrative, rather than the emotional shifts contained therein. Redemption and affective tone often correspond positively with indicators of well-being and adjustment, whereas contamination negatively predicts this outcome (Adler et al., 2017; Dunlop & Tracy, 2013; McAdams et al., 2001).

Functions of narrative identity

A coherent narrative identity provides meaning, purpose, and direction for the narrator (McAdams et al., 1997). In addition, sharing personal stories is a ubiquitous feature of everyday life, providing social functions. For example, communicating personal

stories allows individuals to describe who they are and how they came to be, while also facilitating social connections (Reis & Shaver, 1988).

The personal and social functions of sharing stories have been demonstrated in the applied health literature (Lind et al., 2019). In the context of health experiences, researchers have examined the use of storytelling to improve well-being outcomes in patients with chronic illness (Clarke et al., 2003; Evans et al., 2008). For example, storytelling interventions, wherein individuals share personal stories about a mutual health experience, have a positive impact on patients' well-being (Holm et al., 2005; Sandelowski, 1994). In one study, patients with cancer exhibited lower levels of anxiety, stress, and lack of control after a storytelling intervention relative to a control group who did not receive the intervention (Evans et al., 2008). Sharing stories about personal health experiences helps individuals come to terms with their circumstances, identify personal meaning and direction in their daily lives, and ease their concern about death and uncertainty (Evans et al., 2008; Rozmovits & Ziebland, 2004; Sandelowski, 1994).

Narrative identity has been examined in a variety of contexts and domains, and in reference to a variety of topics, including ethnic, romantic, and professional experiences (Dunlop et al., 2013, 2018). A handful of studies have examined health experiences using the narrative identity framework (Adler et al., 2015; Dunlop & Tracy, 2013). For example, in an ambitious longitudinal study, Adler et al. (2015) examined associations between individual differences in narrative identity (e.g. redemption, contamination) and mental health outcomes during the onset of a major physical illness. Participants who told stories with redemptive themes and low levels of contamination demonstrated positive mental health trajectories following the health diagnosis. This study underscores the fact that individual differences in the narrative construction of personal experiences may function as a protective factor for mental health in the onset of life's challenges (Adler et al., 2015). Considering the implications of storytelling, as well as the longstanding effects of cancer, on well-being, examining survivors' experiences of cancer from a narrative identity perspective will provide indication of the way people make sense of such an identity-challenging experience and the differential relations with well-being.

Cancer survivors and romantic partners

Cancer survivors do not exist in isolation. Their experience is embedded in a narrative ecology that is indicative of how survivors define themselves in relation to others (McLean, 2015). In most instances, the majority of care provided for cancer survivors comes from family caregivers, such as romantic partners, siblings, and children (Bultz et al., 2000; Carlson et al., 2001; Nijboer et al., 1998). Furthermore, in a review of 192 studies examining the effects of caregiving, researchers found that romantic partners were the most common type of caregiver among individuals with cancer (Stenberg et al., 2010). Romantic partners also offer the most comprehensive support for cancer survivors (Grunfeld et al., 2004; Nijboer et al., 1998). Given that one's social network becomes especially critical during times of illness and uncertainty, exploring the experiences of cancer survivors' romantic partners is particularly important.

The negative implications of cancer pertain to survivors and their caretakers alike (Hodges et al., 2005; Nijboer et al., 2001; Stenberg et al., 2010). As cancer survivors' romantic partners often assume a caregiver role, they tend to experience high levels of stress, depressive symptoms, poor health, and relationship strain (Bevans & Sternberg, 2012; Braun et al., 2007; Hagedoorn et al., 2008; Shaffer et al., 2016). Some studies even suggest a reciprocal relationship between survivors and their partners, wherein survivors' and spouses' adjustment to cancer is mutually dependent (Northouse et al., 2001).

In related line of recent research, the role of close others' stories for one's own development has been emphasised (Thomsen & Pillemer, 2017). Vicarious stories are defined as the internal representations of others' life stories (Thomsen & Pillemer, 2017) and hold the potential to inform the construction of one's personal life story (e.g. Panattoni & Thomsen, 2018; Thomsen & Pillemer, 2017). People use the stories of close others as a reference to guide their interpretations and tellings of their own narrative identities.

Taken together, the role of romantic partners in the caregiving process of cancer survivorship (Stenberg et al., 2010), the psychological distress romantic partners experience during survivorship (Bevans & Sternberg, 2012; Stenberg et al., 2010), and the influence of close others' stories for one's own development (Panattoni & Thomsen, 2018) all suggest that an understanding of the way partners narrate the cancer experience may be beneficial. Examining partners' narrative accounts, both their own first-person account and their vicarious account of the survivors' experience, would allow for the investigation of similarities and distinctions in the most challenging aspects of the cancer experience between partners and survivors themselves. This approach may serve to inform applied work and future research. Specifically, highlighting the challenges of partners during the cancer experience, as well as their vicarious interpretation of the survivors' challenges, can bolster support for both the survivor and romantic partner and inform research regarding romantic partner caregivers.

Narrative identity in context: cancer survivorship

In the current studies, we assessed narrative accounts of cancer experiences from cancer survivors (Study 1) and a separate sample of romantic partners of cancer survivors (Study 2). Though several other narrative prompts would have elicited data relevant to this purpose, we chose to prompt participants for low-point moments in particular due to the strong empirical precedent for this approach (Bühler et al., 2017; Cox & McAdams, 2014; Dunlop et al., 2018; McCoy & Dunlop, 2017). Relative to other narrative prompts (e.g. high points), low-point moments appear to be uniquely predictive of certain outcomes. For example, Cox and McAdams (2014) found that the meaning individuals derived from low-point moments predicted emotion regulation two years later. Beyond the psychological literature, the prominence of low points is evident in everyday life, from the language we use (e.g. Weintraub, 1989; Pennebaker et al., 2003) to the testimonials of reformed drug addicts and convicts (Dunlop & Tracy, 2013; Maruna, 2001).

In light of the adverse nature of cancer, interpretation of survivors' and romantic partners' low points is paramount. Low points have been utilised extensively in the literature and contextualising the low point prompt has become routine, as it allows for

the investigation of low points from specific domains, contexts, or social roles. For example, prior research has contextualised the low-point prompt to examine low points pertaining to participants' alcohol-abusing parents (McCoy & Dunlop, 2017), low points within romantic relationships (Bühler et al., 2017; Dunlop et al., 2018), and low points within specific domains of participants' lives (Dunlop et al., 2019). For descriptive and exploratory reasons, we inductively derived themes based on the manifest events described within participants' narratives, as understanding the events cancer survivors identify as low points may be informative to health researchers. We also quantified low point narratives in terms of affective features of redemption (negative-to-positive story arc), contamination (positive-to-negative arc), and affective tone (the degree of positive, relative to negative, emotional content). By quantifying survivors' and partners' low points in terms of nomothetic themes, researchers can explore relations between the meaning people attribute to low points – rather than their manifest content – and psychological adjustment. That is, the thematic characteristics of cancer survivors' narratives might be particularly telling of their general functioning (Dunlop et al., 2018).

To examine relations among these themes and psychological functioning, we incorporated a measure of life satisfaction as well as a brief symptom screening inventory used to assess distress among participants (see Measures section). Incorporating a symptom inventory may be especially germane to those who have experience with cancer and the associated medical protocols. We propose that measuring general life satisfaction along with symptomatology provides a more accurate depiction of how narrative identity corresponds with health and adjustment more broadly and that are, perhaps, uniquely relevant to cancer experiences.

Across two studies, we employed an idiographic-nomothetic approach to investigate the cancer experiences of survivors and survivors' romantic partners. Due to logistical limitations, we examined separate samples of survivors and partners of survivors. We considered survivors' cancer-related low points (Study 1), partners' cancer-related low points (Study 2), and partners' vicarious low points (i.e. the low point they believed the corresponding survivor would report; Study 2). We approached the analysis of these stories from two analytical vantage points. First, we identified the event type reported in each category of low points. Second, we determined whether variability in the affective features of these stories corresponded with participants' health and well-being.

Study 1

In Study 1, cancer survivors provided narrative descriptions of their cancer-related low point and completed measures of somatisation, depression, and satisfaction with life. The events identified in survivors' stories are considered, as are their affective features.

Method

Participants and procedure

Cancer survivors ($N = 191$; 44% female, $M_{age} = 39$, 76.3% Caucasian, 10.2% Asian American, 6.5% Native Hawaiian, 5.9% Latinx, and .5% African American) were

recruited from Amazon's Mechanical Turk (mTurk). Amazon's mTurk is a multi-purpose online participant pool that allows for reliable and efficient data collection (see Buhrmester et al., 2011). To be eligible, participants must have been over the age of 18 years, received a cancer diagnosis at some point in their life, but not currently be undergoing cancer treatment. Following the provision of informed consent, participants provided information pertaining to their cancer, including their diagnosis date, cancer type, and cancer stage at diagnosis. Participants indicated whether they received treatment, and if so, the form of treatment and treatment dates. We then collected their low point narrative and a second narrative unrelated to the current study. Finally, participants provided demographic information and entered a project code to receive a $1.00 compensation.

Measures

The prompts for this study were adapted from the Life Story Interview (LSI; McAdams, 2008), a widely used and validated protocol for collecting autobiographical accounts from individuals' lives (Adler et al., 2017; McAdams, 2008). The prompts were administered via a computer-mediated questionnaire (e.g. Singer & Salovey, 1993). The average length of survivors' responses was 87.8 words ($SD = 71$). Below, we present the low point prompt in its entirety:

> Thinking back over your experience with cancer, please identify a scene that stands out as a low point, or even the low point of this period of your life. Even though this event is unpleasant, we appreciate your providing as much detail as you can about it. What happened in the event, where and when, who was involved, and what were you thinking and feeling? Also, please indicate why you think this particular moment was so bad and what the scene may say about you or your life.

Brief symptom inventory. Participants next completed the Brief Symptom Inventory-18 (BSI-18; Recklitis & Rodriguez, 2007). The BSI-18 is an 18-item measure where survivors rate the degree to which they experience symptoms of somatisation ($M = 1.76$, $SD = .88$, $\alpha = .90$), depression ($M = 1.96$, $SD = 1.03$, $\alpha = .93$), and anxiety ($M = 2.18$, $SD = 1.11$, $\alpha = .94$) on a five-point scale ($1 = not\ at\ all$ to $5 = very\ much$).

Satisfaction with life scale. Participants then completed the five-item Satisfaction with Life Scale (SWLS; Diener et al., 1985; e.g. 'The conditions of my life are excellent') on a seven-point scale ranging from $1 = strongly\ disagree$ to $7 = strongly\ agree$ ($M = 4.50$, $SD = 1.48$, $\alpha = .92$).

Impact of cancer. Participants completed an adapted version of the Impact of Cancer scale, an 82-item measure that assesses five domains in which cancer may have had an impact: life outlook, body and health, feelings about cancer, meaning of cancer, and activities and relationships (Zebrack et al., 2006). Items such as 'Because of cancer I live each day one at a time' were rated on a five-point scale ($1 = strongly\ disagree$ to $5 = strongly\ agree$). We focused on specific elements of cancer impact (life outlook, body and health, feelings about cancer, and meaning of cancer), which led to a revised scale of 34 items. Our analyses focus on two composites, one capturing

positive effects of cancer (17 items; $M = 3.59$, $SD = .69$, $\alpha = .90$) and the other capturing the negative effects of cancer (17 items; $M = 2.95$, $SD = .77$, $\alpha = .90$).

Salience of cancer-related future events. In an open-ended response format, participants wrote about a future in which their cancer has returned and, alternatively, a future in which their cancer remains in remission. This prompt was adapted from the 'lost possible self' prompt wherein participants describe two different futures – a positive and a negative future – in their life story (King & Raspin, 2004). Each possible future was rated on three items assessing the salience of the scenario (e.g. 'How easy was it for you to imagine your life in this scenario?' and 'How much do you think about this possible future?') on a seven-point scale (1 = *not at all*, 7 = *extremely*).

Narrative quantification
Once all data was collected, a two-step process was utilised to explore survivors' cancer low points, quantitatively. First, an inductive approach was used to identify events; this entails reading and interpreting raw data to derive themes (Thomas, 2006). Thus, the first step of our analysis was to read low point narratives and identify common events described. This process resulted in a coding manual that contained five distinct event types (See Table 1 for descriptions and examples of event types).

In the interest of blind coding, narratives were entered in a single spreadsheet, and their order was randomised. The coding manual and a set of narratives were distributed to research assistants. Research assistants coded for the presence/absence of each event type in all narratives to establish interrater reliability (see Table 2). After completing a set of 50 narratives, coders met to resolve discrepancies. During these meetings, raters provided justification for discrepant responses and made a decision to either change or maintain their initial code. Raters were given the opportunity to suggest novel events that they observed when reading survivors' narratives. Through this process, two additional categories were added, resulting in a final manual of seven distinct events (see Table 1).

Affective features
Turning to the second step undertaken in our analyses, a deductive approach was applied to assess themes of survivors' low point narratives. To do so, we quantified all narratives in terms of redemption (a story that begins negatively and ends positively), contamination (a positive-to-negative story arc), and affective tone (the degree of positive, relative to negative, emotional content) using McAdams' (McAdams, 1998, 1999; McAdams et al., 2001) validated coding systems. Redemption and contamination were non-mutually exclusive and coded with a presence/absence system (McAdams et al., 2001), while affective tone was quantified on a five-point Likert-type scale (1 = *very negative*, 5 = *very positive*). Larger values on this scale indicate greater positive emotional qualities (McAdams, 2001, McAdams et al., 2001). For example, narratives high in affective tone contain a large amount of emotionally positive language. The same coding process described above was applied to the nomothetic coding, such that independent raters coded redemption, contamination, and tone and met to resolve

Table 1. Low-point narrative themes (studies 1 and 2).

| | | Study 1 | Examples Study 2 | |
| | | | | |
Theme	Description	1st-person survivor	1st person partner	3rd person survivor
Diagnosis/detection	The moment in which the participant was informed that they had cancer	I was at a routine check-up and the doctor says he wants to run more extensive test on my prostate. [….] My mind started to race at the thought of having cancer. Cancer is something I see on 'House' or the Science Channel. Cancer is my zodiac sign, not my life situation.	The way that we found out about the cancer, was something I will never forget. We were lying down in the dark talking when she sneezed. I went to grab a Kleenex and there was blood flowing from her nose. [...] We raced to the hospital where after a few tests and a long night it was determined she hasd a cancerous tumor on her lung that had burst.	The Cancer diagnosis a couple months ago was a low-point for my partner. Her strength and resolve rubbed off on me. I admire the way she went through the process. She's scared but still trying to be strong for me.
Disclosure	Participant told someone else about their cancer diagnosis	The worst moment was telling my family members I had cancer, especially my father, husband and child. It was difficult because hearing it myself was hard, but needing to tell them and seeing their reaction was just as difficult.	I would say that when my husband told me that the growth on his nose was cancer. [….] The moment was bad because of the uncertainty of it happening again in the future.	Telling his mother was the hardest part for him. He knows she worries and didn't want to put her through it after recently losing his dad to a heart attack.
Physical deformity/ loss of function	Physical change as a result of cancer, permanent loss of function, or general awareness of not being 'the same' post-cancer	I underwent an MRI which found some suspicious areas, and a biopsy showed that the areas were precancerous. When my doctor gave me this news, it was definitely the lowest point of this period. [….] I was hoping to keep functional breasts, and now I was definitely going to lose both of them.	One low-point was when my partner lost her hair from the chemotherapy. She decided to shave her head and to help her through it, I shaved my head, too. [….] It was a hard time for her because she always had thick long hair that she loved to brush regularly.	Having grand mal seizures and losing the ability to effectively speak. He's highly intelligent and athletic so for him to not be able to communicate, use his quick wit, mountain climb, was like prison. Everyday living skills became a challenge.
Pain/sickness	Symptoms and /or pain during treatment	Walking around with a port attached to my flesh. [….]It so that I could receive some of my treatments at home. The look on my children's faces hurt me. They would see me attach a bag of fluid and	The very first time she was given a chemo treatment, she got extremely sick and spent a lot of time vomiting violently. I felt like this was an extremely low-point for me because I had never seen her like that. It was hard to watch, and	The low-point would be when he was experiencing a lot of pain and his functioning wasn't going well. It was what caused him to realise something was wrong and then was hit with the blow that he had cancer.

(continued)

Table 1. Continued.

		Examples		
		Study 1	Study 2	
Theme	Description	1st-person survivor	1st person partner	3rd person survivor
Poor social support/ interpersonal problems	Absence or inappropriate form of social support or other interpersonal problems	slowly watch me descend into listlessness. I felt horrible. I would say that the low-point for we was after my surgery during and after recovery when I talked to people that did not call or visit while I was recovering. […] I starting asking people why, why weren't you there for me? They often replied that my situation scared them, it was just too real, too much for them to handle.	especially because I couldn't do a thing to help her. After her hysterectomy she was very, very depressed. […] That time was very difficult for me because I couldn't seem to help her the way she wanted or needed. […] But it never seemed to make a dent in her mood. […] It was really hard supporting her. I felt like I couldn't have my own needs.	When she did not have the support of family with her around her. […] Her family just did not want to be a part of it. I remember her crying and being so sad and doing my best to comfort her but she wanted more support but she never got it.
Uncertainty	Uncertainty regarding one's health, future, or ability to fulfill responsibilities	In the beginning, not really knowing what will happen even though the doctor said the prognosis was very good. Worried about how I would feel during the treatment, if it would work. How I would look. How my family would support me or feel.	I can remember being stressed out while I was waiting for my husband's surgery to transpire. I was afraid he would have cancer throughout his body and would not survive beyond a few months. Not knowing and waiting is the worst.	The moment where we discovered that the breast lumps were cancer, and needed surgical removal. We had just given birth to our 2nd child, and our future was extremely uncertain at that time.
Mental health	Declining mental health or other mental health issues	When I know that I was affected by Cancer I felt depressed. I was not able to talk to others. I didn't attend any parties. This is the worst part of my life. I lost my self confidence. I preferred to be alone.	When they were diagnosed, they were in denial, refused to talk about getting treatment, talked about waiting to die, I tried to get him to at least see an oncologist to no avail.	I know during her point, depression set in. In her friends, it was odd that it wasn't a rarity and some were a little more advanced than hers. It put her down emotionally.
Surgery	Getting surgery or finding out surgery was necessary		For the low-point was the day of the surgery. My spouse takes blood thinners because of having an	Having the surgery to remove her thyroid and then the radioactive iodine treatments, she was pretty knocked down by it and afraid of

(continued)

Table 1. Continued.

		Examples		
		Study 1	Study 2	
Theme	Description	1st-person survivor	1st person partner	3rd person survivor
Poor medical care	Absence or inappropriate form of medical care		artificial heart valve, and this complicated the surgery. So I was worried that some complication may happen. It was the low-point for me because once again my spouse was to undergo surgery. The medical staff was not helpful. They seemed to want to get rid of us without providing any information. I was scared and concerned about my partner.	losing her voice and sense of taste permanently.
				I think the low-point was the way in which the doctor told us that she had cancer. He kind of strolled into the waiting area where we were sitting, looked down and a chart, gave a brief description of what they saw and that it was cancer and turned and walked away. He never made eye contact or show any sympathy.

Note: Narratives have been edited here for brevity. Empty cells indicate that no narratives of that type fell into the relevant category.

coding discrepancies. The inter-rater reliability for redemption ($\kappa = .92$), contamination ($\kappa = .88$), and affective tone ($ICC = .91$) was substantial.

Results

Table 1 provides descriptions and examples of the events that cancer survivors commonly recognised as cancer low points in Study 1 (see column labeled '1st person survivor'). Table 1 also contains descriptions and examples of the events romantic partners recognised as cancer low points drawn from Study 2 (described below). Table 2 provides the prevalence of each of these events and displays the interrater reliability for each event category. Evident from Table 2, a majority of participants (56.0%) identified the moment of diagnosis or detection of cancer as their low point, followed by moments of uncertainty (e.g. the period prior to diagnosis; 25.6%). For example, one participant described the moment of detection as their low-point moment, stating, 'I was at a routine check-up and the doctor says he wants to run more extensive test on my prostate. […] My mind started to race at the thought of having cancer … '

We next explored the affective components of low point memories in relation to survivors' psychological adjustment (See Table 3). Participants who narrated contaminated low point stories exhibited marginally *less* somatisation, envisioned a future in which their cancer returns was *less* salient and reported that cancer had a marginally less positive impact in their lives, relative to participants who did not provide contaminated low point stories. These findings held when controlling for stage, time since diagnosis, and duration of treatment; in fact, the association between contamination and somatisation became significant in the applicable regression model, $p = .02$.[1] Redemption was relatively uncommon in participants' low point memories, perhaps unsurprisingly, and it was unassociated with psychological adjustment. Affective tone was also unassociated with all adjustment scales.

Discussion

Study 1 revealed that survivors most frequently identified the moment of diagnosis or detection as the low point of their cancer experience. Further, our findings surprisingly suggest that survivors who narrated a contaminated low point memory were in some ways better off than those who did not provide contaminated stories, reporting less somatisation and less focus on a future in which their cancer returned – although they also reported that cancer's impact on their life was less positive. Affective tone provided little indication of survivors' psychological adjustment, and redemption was relatively uncommon. These findings illuminate the experiences of survivors themselves; in Study 2 we turn to the experiences of members of survivors' support network, namely romantic partners.

Study 2

In Study 2, romantic partners provided two narratives. First, of their own low point during their partner's experience with cancer (e.g. a first-person partner account), and

Table 2. Frequency of event reports and interrater reliabilities for event categories (studies 1 and 2).

| | Study 1 | | Study 2 | | | |
	1st-person survivor	Interrater reliability	1st-person partner	Interrater reliability	3rd-person survivor	Interrater reliability
Theme						
Diagnosis	56.0%	$\kappa = .84$	33.6%	$\kappa = .80$	53.7%	$\kappa = .91$
Disclosure	11.5%	$\kappa = .92$	7.0%	$\kappa = .83$	4.2%	$\kappa = .90$
Physical deformity	13.1%	$\kappa = .85$	4.7%	$\kappa = .81$	7.9%	$\kappa = .93$
Pain/sickness	16.8%	$\kappa = .85$	22.4%	$\kappa = .78$	27.1%	$\kappa = .80$
Poor social support	14.7%	$\kappa = .81$	18.2%	$\kappa = .90$	10.3%	$\kappa = .85$
Uncertainty	25.7%	$\kappa = .84$	22.4%	$\kappa = .84$	15.8%	$\kappa = .89$
Mental health	18.3%	$\kappa = .83$	16.4%	$\kappa = .82$	14.5%	$\kappa = .77$
Surgery	N/A	N/A	15.0%	$\kappa = .96$	15.8%	$\kappa = .96$
Poor medical care	N/A	N/A	4.2%	$\kappa = 1.00$	1.4%	$\kappa = .98$

Table 3. Associations between narrative dimensions and adjustment (study 1).

| | Contamination | | | Redemption | | | Affective tone |
	Present M (SD) $n = 41$	Absent M (SD) $n = 150$	t (r_{es})	Present M (SD) $n = 19$	Absent M (SD) $n = 172$	t (r_{es})	r
Somatisation	1.55 (.76)	1.82 (.90)	1.70^{+} (.12)	1.57 (.76)	1.78 (.89)	0.99 (.07)	.01
Depression	1.90 (1.52)	1.97 (1.81)	0.39 (.03)	1.98 (1.42)	1.96 (1.80)	−0.10 (.01)	−.04
Anxiety	1.98 (1.19)	2.23 (1.08)	1.28 (.09)	2.12 (1.15)	2.19 (1.11)	0.24 (.02)	−.03
Satisfaction with life	4.56 (1.67)	4.49 (1.43)	−0.27 (.02)	4.61 (1.34)	4.49 (1.50)	−0.33 (.02)	.11
Positive impact of cancer	3.41 (.74)	3.64 (.67)	1.89^{+} (.14)	3.61 (.68)	3.59 (.69)	−0.11 (.01)	.03
Negative impact of cancer	2.82 (.83)	2.99 (.74)	1.27 (.09)	2.98 (.65)	2.95 (.78)	−0.13 (.01)	−.09
Salience of recurrence	4.38 (1.66)	4.90 (1.44)	1.97^{*} (.14)	4.86 (1.43)	4.79 (1.51)	−0.20 (.01)	.10
Salience of remission	5.49 (1.52)	5.78 (1.10)	1.34 (.10)	5.67 (.72)	5.72 (1.24)	0.19 (.01)	.09

Note: $^{**}p < .01$; $^{*}p < .05$; $^{+}p < .10$.

second, a vicarious narrative, or the event that they believed the survivor would identify as their own cancer-related low point. We were interested in identifying the events disclosed in these types of stories, while also exploring whether the affective features contained therein were statistically associated with psychological adjustment. The romantic partners in Study 2 were unassociated with the survivors in Study 1 due to logistical hurdles involved in contacting the partners of Study 1 participants. Future research should extend this work to partnered couples including a cancer survivor and his or her romantic partner.

In light of Study 1's findings, we remained agnostic regarding the effects of affective tone and redemption on indicators of adjustment. However, we tested competing hypotheses with respect to contamination: (1) partners who form contaminated narratives may exhibit better adjustment relative to those who do not form contaminated narratives, as was the case in Study 1, or (2) partners may narrate cancer experiences in a different manner than survivors, thereby displaying more typical relations between affective features and indicators of adjustment (i.e. negative associations).

Table 4. Associations between narrative dimensions and adjustment (study 2).

	Contamination			Redemption			Affective tone
	Present M (SD)	Absent M (SD)	t (r$_{es}$)	Present M (SD)	Absent M (SD)	t (r$_{es}$)	r
First-person partner narrative	n = 4	n = 210		n = 9	n = 206		
Somatisation	1.00 (0.00)	1.60 (0.80)	1.49 (.10)	1.78 (0.91)	1.58 (0.79)	−0.75 (.05)	.14*
Depression	1.46 (0.51)	1.94 (1.80)	0.89 (.06)	1.61 (0.69)	1.95 (1.09)	0.92 (.06)	.001
Anxiety	1.67 (0.43)	1.96 (1.06)	0.56 (.04)	1.96 (0.72)	1.96 (1.07)	−0.01 (.001)	.02
Satisfaction with life	5.10 (0.74)	4.60 (1.36)	−0.74 (.05)	4.76 (0.94)	4.60 (1.37)	−0.34 (.02)	.09
Salience of recurrence	4.08 (0.83)	4.66 (1.50)	0.76 (.05)	5.19 (1.18)	4.63 (1.51)	−1.10 (.07)	.05
Salience of remission	5.50 (1.04)	5.59 (1.38)	0.13 (.01)	5.85 (1.14)	5.58 (1.38)	−0.59 (.04)	−.01
Cancer worry	3.08 (1.29)	2.87 (1.11)	−0.38 (.03)	2.89 (1.09)	2.88 (1.11)	−0.03 (.002)	−.11+
Vicarious narrative	n = 1	n = 213		n = 15	n = 199		
Somatisation	1.00 (N/A)	1.59 (0.80)	0.74 (.05)	1.36 (0.83)	1.60 (0.79)	1.16 (.08)	−.04
Depression	1.17 (N/A)	1.94 (1.08)	0.71 (.05)	1.52 (0.98)	1.96 (1.08)	1.53 (.10)	−.08
Anxiety	1.50 (N/A)	1.96 (1.06)	0.44 (.03)	1.42 (0.39)	2.00 (1.08)	2.06* (.14)	−.15*
Satisfaction with life	6.00 (N/A)	4.60 (1.35)	−1.03 (.07)	5.36 (0.85)	4.55 (1.37)	−2.26* (.15)	.10
Salience of recurrence	3.00 (N/A)	4.66 (1.49)	1.11 (.08)	4.93 (1.46)	4.63 (1.50)	−0.76 (.05)	.10
Salience of remission	7.00 (N/A)	5.58 (1.37)	−1.03 (.07)	6.09 (1.03)	5.55 (1.39)	−1.47 (.10)	−.01
Cancer worry	2.67 (N/A)	2.88 (1.11)	0.19 (.01)	2.98 (1.04)	2.87 (1.11)	−0.37 (.03)	−.04

Note: **p < .01; *p < .05; +p < .10.

Method

Participants and procedure

Two hundred and fourteen mTurkers (50.9% female, M_{age} = 37.2 years, SD_{age} = 12.6, 78.9% Caucasian, 7.4% African American, 5.1% Asian American, 2.8% Latinx, and 2.8% either Native Hawaiian) took part in this study. To be eligible for participation, romantic partners must have been currently involved with a cancer survivor. After providing consent, partners reported the date of their significant other's cancer diagnosis, cancer type, and cancer stage. They next indicated whether their significant other received treatment, and if so, the form and treatment dates. Participants then responded to two narrative prompts, one representing their first-person partner account and a second representing their vicarious account and completed several measures of well-being. Finally, participants provided demographic information and entered a project code to receive a $1.00 compensation.

Measures

Participants were asked to describe a personally-salient low point from the survivor's cancer experience (e.g. first-person partner account). The prompt for this narrative was identical to the prompt for first-person survivors but was directed towards partners. The average length of partners' first-person narratives was 67.3 (SD = 54) words. Participants were also asked to provide a vicarious narrative of the event that they believed represented the survivor's low point during the cancer experience:

> Now, again thinking back over your partner's experience with cancer, please *identify a scene that you believe stands out as a low point for your partner*, or even the low point of this period of your partner's life.

The average length of vicarious narratives was 61.0 ($SD = 47$) words, and the order of these two prompts was counterbalanced across participants. Partners then completed the same follow-up questions regarding their low point as in Study 1.

Non-narrative measures

As in Study 1, participants completed the BSI-18 to assess their symptoms of somatisation ($M = 1.58$, $SD = .79$, $\alpha = .90$), anxiety ($M = 1.96$, $SD = 1.05$, $\alpha = .93$), and depression ($M = 1.93$, $SD = 1.08$, $\alpha = .94$), and the Satisfaction with Life Scale ($M = 4.65$, $SD = 1.35$, $\alpha = .90$). Participants completed a three-item adapted version of the Brief Worry Scale (BWS; Meyer et al., 1990) to examine the frequency and intensity of their worry surrounding their survivor's illness ($M = 2.87$, $SD = 1.11$, $\alpha = .89$). Each item of the BWS was adjusted to assess the worry partners may have felt regarding their significant other's cancer (e.g. 'Thinking about your partner, how worried are you about cancer?') on a scale from 1 = *not at all/never* to 5 = *extremely/all of the time*. Next, participants described and rated the salience of a future in which their partner's cancer has returned ($M = 4.65$, $SD = 1.50$, $\alpha = .78$) or remained in remission ($M = 5.59$, $SD = 1.37$, $\alpha = .88$).

Narrative quantification

Partners low points were quantified in terms of the seven event types derived in Study 1 (see Table 1). Narratives were coded using an identical process to Study 1, which allowed coders to identify additional coding dimensions that were relevant to these stories. Raters identified two additional coding dimensions that, although not relevant to the stories considered in Study 1, appeared relevant to partners data. The inter-rater reliabilities are presented in Table 2. Paralleling Study 1, we utilised a deductive approach to assess redemption, contamination, and affective tone. The inter-rater reliability for redemption ($\kappa = .78$), contamination ($\kappa = .94$), and affective tone ($ICC = .82$) was substantial.

Results

Table 1 contains the events that partners recognise as their own (first-person partner) and their vicarious (their account of the survivors' experience) low point memories. Table 2 depicts the prevalence of events among first-person partner and vicarious narratives. The most frequently recognised event among first-person partner and vicarious narratives was the moment of diagnosis or detection (34% and 54%, respectively).

We then determined whether the affective qualities of cancer-related low points were associated with romantic partners' psychological adjustment. However, rates of redemption and contamination in both first-person partner and vicarious narratives were quite rare. Thus, we present the findings from *t*-tests comparing narratives with and without those themes in Table 4 in the interest of transparency but do not interpret them here. Turning to tone, positively valenced first-person partner narratives

related to marginally less worry and, surprisingly, significantly more somatisation. Partners whose vicarious narrative contained more positive tone reported significantly less anxiety.

Discussion

Study 2 examined the experiences of cancer survivors' romantic partners (but not the specific survivors examined in Study 1). Interestingly, there was a marked similarity in the events recognised as low points in first-person partner and vicarious accounts, relative to survivors' accounts collected in Study 1. The moment of diagnosis, pain and sickness during treatment, and uncertainty represent the most frequently identified events among first-person partner and vicarious accounts, as was true of survivor accounts in Study 1. Specifically, these three event categories represent 78% and 97% of low point events for first-person partner and vicarious stories, respectively.

Although we found consistency in the overall prevalence of low point events across narratives, a narrow majority of partners (50.5%) identified divergent types in their first-person partner and vicarious narratives. For example, the moment of diagnosis or detection was described 34% of the time in first-person partner narratives and 54% of the time in vicarious narratives, yet only 24% of partners narrated events relevant to diagnosis or detection as the low-point experience in *both* the first-person partner and vicarious narrative. We further inspected pairs of narratives that fell into the same conceptual category to determine the percentage of participants who described identical events in their two narratives and found that only 20.5% of the sample believed their own and their partner's low points were the same. The lack of consistency between first-person partner and vicarious narratives suggests that partners consciously distinguish between their own experience and that of the cancer survivor. Future work on vicarious life stories should consider the overlap in manifest events. An understanding of the degree of consistency in these manifest events can bolster support and inform future research regarding the experiences of survivors and their support network.

As was the case in Study 1, redemption was quite rare in both first-person partner and vicarious accounts – perhaps natural, given that the prompt specifically solicits a cancer low point. In contrast to Study 1, however, contamination was also quite rare in partners' narratives. Indeed, only one participant narrated a first-person story with contamination, and only 2% included contamination in a vicarious story, compared to 21% in survivors' accounts. We return to this discrepancy in the general discussion.

Findings for affective tone also differed from the (non)findings in Study 1. Here, the links between affective tone and adjustment were mixed, with positive tone showing beneficial relations with worry (in first-person partner narratives) and anxiety (in vicarious narratives), but a seemingly detrimental effect for somatisation (in first-person partner narratives). To our knowledge, this pattern of results is the first known instance of vicarious stories corresponding with outcomes with which first-person stories did not exhibit significant relations. Typically, personal and vicarious stories correspond with outcomes in a uniform way (Panattoni & Thomsen, 2018). Our findings provide support for the notion that vicarious stories may offer incremental validity in

the prediction of certain measures of health and well-being, relative to non-vicarious stories.

General discussion

The present studies explored the cancer-related low-point narratives of cancer survivors and romantic partners of survivors, as well as vicarious narratives of survivors' experiences, provided by romantic partners. We sought to determine (a) the manifest events survivors and partners recognised as cancer low points, (b) whether partners' perceptions of survivors' low points aligned with reports of a separate sample of survivors, and (c) whether the affective features of cancer-related stories corresponded with participants' psychological adjustment.

Low point events in the cancer experience

In both studies, we explored the low-point events identified within cancer experiences. In Study 1, survivors most commonly identified the moment of diagnosis as the lowest point within the cancer experience. Partners in Study 2 appeared cognizant of this moment as a low point, as they also most frequently recognised the moment of diagnosis as their partners' cancer low point within their vicarious narratives. Thus, overall, the events cancer survivors deemed as low points map fairly well onto the events recounted in partners' vicarious narratives.

The prevalence of the diagnosis in participants' low-point narratives deviates from additional research exploring the most difficult periods in a cancer experience. A common perception among laypeople and researchers alike is that undergoing treatment is the most difficult aspect of cancer. This belief is evidenced by substantial attention in the literature directed towards developing well-being and distress reduction interventions for patients undergoing cancer treatment (e.g. Linden & Girgis, 2012; Pan et al., 2017; Salakari et al., 2015). However, our results tell a different story about the cancer experience, one with a focus on the pivotal moment when an individual goes from a patient with a set of symptoms to a 'cancer patient'. This approach serves to inform future work designed to enhance adjustment throughout the cancer process.

Examining the manifest events among survivors and partners, the themes of 'Surgery' and 'Poor medical care' were identified in the narratives of partners' cancer-related low-point moments, but not in survivors' own narratives. This is a noteworthy discrepancy, as some research has identified these two events as significant to the cancer experience (Schnur et al., 2008; Tsianakas et al., 2012). For example, in one study, researchers assessed breast cancer patients' satisfaction with their care using survey reports ($n = 82$) and open-ended written interviews ($n = 13$; Tsianakas et al., 2012). Of the 13 patients who completed open-ended interviews, most recognised surgery as a negative experience. Patients who completed the survey commonly reported dissatisfaction with various aspects of their experience, including wait times, appointment errors, and medical care (Tsianakas et al., 2012). In other studies, researchers find that surgery is emotionally distressing for cancer patients (Schnur et al., 2008). The discrepancy between this extant work and our own may be due to the fact that we

prompted participants for a low-point moment, rather than a number of difficult experiences. This approach may have skewed responses to very salient finite experiences, such as the diagnosis, rather than more nuanced experiences, such as 'poor medical care'. In future, researchers should examine a host of autobiographical moments from the cancer experience to gain a more reliable depiction of the cancer experience.

All of the above being said, the importance of diagnostic events has not gone unrecognised in the fields of clinical oncology and communication science, as researchers have explored the ways in which communicating bad news to cancer patients may lead to enhanced well-being and adjustment (e.g. Sastre et al., 2011). Within psychological science, prior research reveals that the diagnosis is often the most impactful stressor within the cancer experience (Andrykowski et al., 1998). Studies relying upon qualitative analysis have explored the narration of cancer and emphasised the unique impact of cancer on individuals' lives (Comaroff & Maguire, 1981; Jain, 2013; Segal, 2012). Yet, quantitatively, many studies examining the diagnosis itself have focused on psychological outcomes following the first year of diagnosis (e.g. Hulbert-Williams et al., 2012).

The present studies attempt to bridge the gap between these literatures by uniting an open-ended assessment of cancer experiences with a quantitative analysis of how features of these stories relate to health and well-being. This approach allowed for an examination of the events participants deem most significant to their cancer experience and provides an indication of how the manner in which individuals story their experience with cancer relates to relevant health outcomes. Overall, our findings call attention to factors that exacerbate or mitigate distress during the moment of detection or diagnosis, such as psychosocial aspects of screening and biopsy procedures as well as patients' sources and perceptions of social support at the time of diagnosis. Moreover, the prevalence of diagnosis as the most difficult moment in the cancer experience may be due to a recall bias, such that participants may be more likely to recognise diagnosis as the low point when retrospectively reflecting on the experience. Participants may identify a different aspect of the experience as the low-point moment when they are going through cancer treatment.

Affective features of the survivorship story

Based on previous research, we expected that participants with contaminated stories would report poorer adjustment, and participants with redemptive and positively-toned stories would report better adjustment, compared to participants who did not form stories with these themes. Unexpectedly, however, survivors who formed contaminated stories reported marginally less somatisation (i.e. physical symptoms that may be manifestations of psychological distress), and a future in which their cancer returns was less salient, relative to those who did not provide contaminated stories. In contrast, and consistent with our hypotheses, relative to non-contaminated survivors, those who told a contaminated low point also felt that cancer had a less positive impact on their lives. Among romantic partners' narratives, redemption and contamination were uncommon, while affective tone corresponded with indicators of adjustment within both first-person partner and vicarious narratives. Within first-person

partner and vicarious narratives, relations between affective tone and adjustment were varied, with a positive tone showing beneficial relationships with worry and anxiety, but a seemingly detrimental effect for somatisation.

Among non-specialised populations, redemption and affective tone typically correspond positively with indicators of adjustment, whereas contamination is often negatively associated with adjustment. Recently, however, a growing body of literature has revealed that constructing redemptive stories may be less common and predictive of decreased psychological functioning for vulnerable groups (Breen & McLean, 2016; McCoy & Dunlop, 2017; McLean, 2014; McLean & Mansfield, 2011; McLean et al., 2013). Thus, it is possible that contamination corresponded positively, and affective tone corresponded negatively, with indicators of adjustment due to the challenges associated with storying an experience of adversity. Among populations who have faced systematic hardships (e.g. being the child of an alcoholic parent, vulnerable adolescents), redemptive imagery may be less common and less predictive of positive outcomes, as it is often difficult or detrimental to redeem negative circumstances. Therefore, our findings, though surprising, fit well into this burgeoning literature within the broader world of narrative research.

Second, the lack of contamination in partners' stories, relative to survivors' stories, speaks to the difference in the narrative structure of survivors and partners. These findings suggest that although romantic partners were quite accurate in identifying low-point experiences that matched those of cancer survivors, survivors may have a heightened awareness regarding the ongoing nature of their cancer experience, thereby highlighting its wholly contaminated structure. In contrast, partners may feel like the cancer experience is blessedly over once the survivor is in remission.

Limitations and future directions

The current investigation had several limitations. First, low-point narratives represent only one type of scene in the cancer experience. Prompting participants to reflect on several key scenes would have allowed for an aggregation of responses, thereby providing a more reliable depiction of the cancer experience more broadly. Second, the participants in Study 2 were not the romantic partners of the participants in Study 1. Therefore, we are uncertain as to whether the current findings extend to dyadic experiences (i.e. intact survivor/partner dyads). Third, the use of an online survey collection website presents limitations to the current studies that may impact the generalisability of our findings. While Amazon's Mechanical Turk has been shown to be a reliable source for collecting health-related data (Mortensen & Hughes, 2018), one weakness of this method is its ethnically homogenous participant pool. In future, researchers should examine cancer experiences longitudinally and within partnered couples to gain insights into how cancer stories co-evolve over time, as well as the evolution of associations between affective features and markers of adjustment. Although numerous questions remain regarding the lived experiences of cancer survivors and their romantic partners, our findings provide initial insights into the stories they tell and the nuanced manner in which these stories reflect their psychological adjustment.

Note

1. We also explored whether characteristics of the diagnosis (e.g., stage, time since diagnosis, and duration of treatment) moderated associations between affective features and adjustment and found no significant moderating effects.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

Adler, J. M., Dunlop, W. L., Fivush, R., Lilgendahl, J., Lodi-Smith, J., McAdams, D., McLean, K., Pasupathi, M., & Syed, M. (2017). Research methods for studying narrative identity. *Social Psychological and Personality Science*, 8(5), 519–527. doi:10.1177/1948550617698202

Adler, J. M., Lodi-Smith, J., Philippe, F. L., & Houle, I. (2016). The incremental validity of narrative identity in predicting well-being. *Personality and Social Psychology Review*, 20(2), 142–175. doi: 10.1177/1088868315585068

Adler, J. M., Turner, A. F., Brookshier, K. M., Monahan, C., Walder-Biesanz, I., Harmeling, L. H., Albaugh, M., McAdams, D. P., & Oltmanns, T. F. (2015). Variation in narrative identity is associated with trajectories of mental health over several years. *Journal of Personality and Social Psychology*, 108(3), 476–496. doi:10.1037/a0038601

Andrykowski, M. A., Cordova, M. J., Studts, J. L., & Miller, T. W. (1998). Posttraumatic stress disorder after treatment for breast cancer: Prevalence of diagnosis and use of the PTSD Checklist—Civilian Version (PCL-C) as a screening instrument. *Journal of Consulting and Clinical Psychology*, 66(3), 586–590. doi:10.1037/0022-006X.66.3.586

Bauer, J. J., McAdams, D. P., & Sakaeda, A. (2005). Interpreting the good life: Growth memories in the lives of mature, happy people. *Journal of Personality and Social Psychology*, 88(1), 203–217. doi:10.1037/0022-3514.88.1.203

Bellizzi, K. M., & Blank, T. O. (2007). Cancer-related identity and positive affect in survivors of prostate cancer. *Journal of Cancer Survivorship: Research and Practice*, 1(1), 44–48. doi:10.1007/s11764-007-0005-2

Bevans, M., & Sternberg, E. (2012). Caregiving burden, stress, and health effects among family caregivers of adult cancer patients. *JAMA*, 307(4), 398–403. doi:10.1001/jama.2012.29

Braun, M., Mikulincer, M., Rydall, A., Walsh, A., & Rodin, G. (2007). Hidden morbidity in cancer: Spouse caregivers. *Journal of Clinical Oncology*, 25(30), 4829–4834. doi:10.1200/JCO.2006.10.0909

Breen, A., & McLean, K. (2016). The intersection of personal and master narratives: Is redemption for everyone? In B. Schiff (Ed.), *Narrative matters: Papers from the 2012 Conference*. The American University of Paris.

Bühler, J. L., & Dunlop, W. L. (2019). The narrative identity approach and romantic relationships. *Social and Personality Psychology Compass*, 13(4), e12447. doi:10.1111/spc3.12447

Bühler, J. L., Maghsoodi, H., & McAdams, D. P. (2017). *The Relationship Narrative Interview (RNI): A manual to assess romantic partners' relationship stories*. Unpublished manuscript. Northwestern University.

Buhrmester, M., Kwang, T., & Gosling, S. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6(1), 3–5. doi:10.1177/1745691610393980

Bultz, B. D., Speca, M., Brasher, P. M., Geggie, P. H., & Page, S. A. (2000). A randomized controlled trial of a brief psychoeducational support group for partners of early stage breast cancer patients. *Psycho-Oncology*, *9*(4), 303–313. doi:10.1002/1099-1611(200007/08)9:4<303::AID-PON462>3.0.CO;2-M

Carlson, L. E., Ottenbreit, N., Pierre, M. S., & Bultz, B. D. (2001). Partner understanding of the breast and prostate cancer experience. *Cancer Nursing*, *24*(3), 231–239. doi:10.1097/00002820-200106000-00010

Comaroff, J., & Maguire, P. (1981). Ambiguity and the search for meaning: Childhood leukaemia in the modern clinical context. *Social Science & Medicine. Part B: Medical Anthropology*, *15*, 115–123. doi:10.1016/0160-7987(81)90034-X

Cox, K., & McAdams, D. (2014). Meaning making during high and low-point story episodes predicts emotion regulation two years later: How the past informs the future. *Journal of Research in Personality*, *50*, 66–70. doi:10.1016/j.jrp.2014.03.004

Clarke, A., Hanson, E. J., & Ross, H. (2003). Seeing the person behind the patient: Enhancing the care of older people using a biographical approach. *Journal of Clinical Nursing*, *12*(5), 697–706. doi:10.1046/j.1365-2702.2003.00784.x

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*(1), 71–75. doi:10.1207/s15327752jpa4901_13

Deimling, G. T., Bowman, K. F., & Wagner, L. J. (2007). Cancer survivorship and identity among long-term survivors. *Cancer Investigation*, *25*(8), 758–765. doi:10.1080/07357900600896323

Dunlop, W. L., Hanley, G. E., & McCoy, T. P. (2019). The narrative psychology of love lives. *Journal of Social and Personal Relationships*, *36*(3), 761–784. doi:10.1177/0265407517744385

Dunlop, W. L., Harake, N. R., Gray, J. S., Hanley, G. E., & McCoy, T. P. (2018). The rises and falls of romance: Considering redemption, contamination, and affective tone in the narrative construction of love lives. *Journal of Research in Personality*, *74*, 23–29. doi:10.1016/j.jrp.2018.01.003

Dunlop, W. L., & Tracy, J. L. (2013). Sobering stories: Narratives of self-redemption predict behavioral change and improved health among recovering alcoholics. *Journal of Personality and Social Psychology*, *104*(3), 576–590. doi:10.1037/a0031185

Dunlop, W. L., Walker, L. J., & Wiens, T. K. (2013). What do we know when we know a person across contexts? Examining self-concept differentiation at the three levels of personality. *Journal of Personality*, *81*(4), 376–389. doi:10.1111/jopy.12018

Evans, B. C., Crogan, N. L., & Bendel, R. (2008). Storytelling intervention for patients with cancer: Part 1 – Development and implementation. *Oncology Nursing Forum*, *35*(2), 257–264. doi:10.1188/08.ONF.257-264

Frank, A. (1995). *The wounded storyteller: Body, illness and ethics*. University of Chicago Press.

Grunfeld, E., Coyle, D., Whelan, T., Clinch, J., Reyno, L., Earle, C. C., Willan, A., Viola, R., Marjorie, C., Janz, T., & Glossop, R. (2004). Family caregiver burden: Results of a longitudinal study of breast cancer patients and their principal caregivers. *Canadian Medical Association Journal*, *170*(12), 1795–1801. doi:10.1503/cmaj.1031205

Habermas, T., & Bluck, S. (2000). Getting a life: The emergence of the life story in adolescence. *Psychological Bulletin*, *126*(5), 748–769. doi:10.1037/0033-2909.126.5.748

Hagedoorn, M., Sanderman, R., Bolks, H., Tuinstra, J., & Coyne, J. (2008). Distress in couples coping with cancer: A meta-analysis and critical review of role and gender effects. *Psychological Bulletin*, *134*(1), 1–30. doi:10.1037/0033-2909.134.1.1

Harrington, C. B., Hansen, J. A., Moskowitz, M., Todd, B. L., & Feuerstein, M. (2010). It's not over when it's over: Long-term symptoms in cancer survivors – A systematic review. *International Journal of Psychiatry in Medicine*, *40*(2), 163–181. doi:10.2190/PM.40.2.c

Harwood, J., & Sparks, L. (2003). Social identity and health: An intergroup communication approach to cancer. *Health Communication*, *15*(2), 145–159. doi:10.1207/S15327027HC1502_3

Hodges, L., Humphris, G., & Macfarlane, G. (2005). A meta-analytic investigation of the relationship between the psychological distress of cancer patients and their careers. *Social Science & Medicine*, *60*, 1–12. doi:10.1016/j.socscimed.2004.04.018

Holm, A., Lepp, M., & Ringsberg, K. C. (2005). Dementia: Involving patients in storytelling – A caring intervention. A pilot study. *Journal of Clinical Nursing*, *14*(2), 256–263. doi:10.1111/j.1365-2702.2004.01042.x

Hulbert-Williams, N., Neal, R., Morrison, V., Hood, K., & Wilkinson, C. (2012). Anxiety, depression and quality of life after cancer diagnosis: What psychosocial variables best predict how patients adjust? *Psycho-Oncology*, *21*(8), 857–867. doi:10.1002/pon.1980

Jain, S. S. (2013). *Malignant how cancer becomes us*. University of California Press.

Kaiser, K. (2008). The meaning of the survivor identity for women with breast cancer. *Social Science & Medicine*, *67*, 79–87. doi:10.1016/j.socscimed.2008.03.036

King, L., & Raspin, C. (2004). Lost and found possible selves, subjective well-being, and ego development in divorced women. *Journal of Personality*, *72*(3), 603–632. doi:10.1111/j.0022-3506.2004.00274.x

Koch, L., Jansen, L., Brenner, H., & Arndt, V. (2013). Fear of recurrence and disease progression in long-term ($\geq$5 years) cancer survivors-a systematic review of quantitative studies. *Psycho-Oncology*, *22*(1), 1–11. doi:10.1002/pon.3022

Lind, M., Demiray, B., & Bluck, S. (2019). Identifying distinct sets of predictors of specific functions of autobiographical memory. *Memory*, *27*(9), 1313–1318. doi:10.1080/09658211.2019.1639759

Linden, W., & Girgis, A. (2012). Psychological treatment outcomes for cancer patients: What do meta-analyses tell us about distress reduction? *Psycho-Oncology*, *21*(4), 343–350. doi:10.1002/pon.2035

Little, M., Paul, K., Jordens, C. F., & Sayers, E.-J. (2002). Survivorship and discourses of identity. *Psycho-Oncology*, *11*(2), 170–178. doi:10.1002/pon.549

Maruna, S. (2001). *Making good: How ex-convicts reform and rebuild their lives*. American Psychological Association.

McAdams, D. P. (1995). What do we know when we know a person? *Journal of Personality*, *63*(3), 365–396. doi:10.1111/j.1467-6494.1995.tb00500.x

McAdams, D. P. (1998). *Contamination sequence coding guidelines*. Unpublished manuscript, Northwestern University.

McAdams, D. P. (1999). *Coding narrative accounts of autobiographical scenes for redemption sequences* (4th rev.). Unpublished manuscript, Northwestern University.

McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology*, *5*(2), 100–122. doi:10.1037/1089-2680.5.2.100

McAdams, D. P. (2008). *The life story interview*. The Foley Center for the Study of Lives, Northwestern University. Retrieved from http://www.sesp.northwestern.edu/foley/instruments/interview/

McAdams, D. P. (2013). The psychological self as actor, agent, and author. *Perspectives on Psychological Science*, *8*(3), 272–295. doi:10.1177/1745691612464657

McAdams, D. P., Diamond, A., de St. Aubin, E., & Mansfield, E. (1997). Stories of commitment: The psychosocial construction of generative lives. *Journal of Personality and Social Psychology*, *72*(3), 678–694. doi:10.1037/0022-3514.72.3.678

McAdams, D. P., Reynolds, J., Lewis, M., Patten, A., & Bowman, P. (2001). When bad things turn good and good things turn bad: Sequences of redemption and contamination in life narrative, and their relation to psychosocial adaptation in midlife adults and in students. *Personality and Social Psychology Bulletin*, *27*(4), 474–483. doi:10.1177/0146167201274008

McCoy, T. P., & Dunlop, W. L. (2017). Down on the upside: Redemption, contamination, and agency in the lives of adult children of alcoholics. *Memory*, *25*(5), 586–594. doi:10.1080/09658211.2016.1197947

McLean, K. C. (2014, February). *Are there risks to narrative processing and redemption? It depends on who you are and what you are reflecting on*. In W. L. Dunlop (Chair) Revisiting the redemptive story. Symposium presented at the Society for Personality and Social Psychology, Austin, TX.

McLean, K. C. (2015). *The co-authored self: Family stories and the construction of personal identity*. Oxford University Press.

McLean, K. C., & Fournier, M. A. (2008). The content and processes of autobiographical reasoning in narrative identity. *Journal of Research in Personality*, *42*(3), 527–545. doi:10.1016/j.jrp.2007.08.003

McLean, K. C., & Mansfield, C. (2011). To reason or not to reason: Is autobiographical reasoning always beneficial? *New Directions for Child and Adolescent Development*, *2011*(131), 85–97. doi:10.1002/cd.291

McLean, K. C., Pasupathi, M., & Pals, J. L. (2007). Selves creating stories creating selves: A process model of self-development. *Personality and Social Psychology Review*, *11*(3), 262–278. doi:10.1177/1088868307301034

McLean, K. C., Wood, B., & Breen, A. (2013). Reflecting on a difficult life narrative construction in vulnerable adolescents. *Journal of Adolescent Research*, *28*(4), 431–452. doi:10.1177/0743558413484355

Meyer, T., Miller, M., Metzger, R., & Borkovec, T. (1990). Development and validation of the Penn State worry questionnaire. *Behaviour Research and Therapy*, *28*(6), 487–495. doi:10.1016/0005-7967(90)90135-6

Miller, K. D., Siegel, R. L., Lin, C. C., Mariotto, A. B., Kramer, J. L., Rowland, J. H., Stein, K. D., Alteri, R., & Ahmedin, J. (2016). Cancer treatment and survivorship statistics, 2016. *CA: A Cancer Journal for Clinicians*, *66*, 271–289. doi:10.3322/caac.21349

Miller, L., & Caughlin, J. (2013). "We're going to be survivors": Couples identity challenges during and after cancer treatment. *Communication Monographs*, *80*(1), 63–82. doi:10.1080/03637751.2012.739703

Mitchell, A., Chan, M., Bhatti, H., Halton, M., Grassi, L., Johansen, C., & Meader, N. (2011). Prevalence of depression, anxiety, and adjustment disorder in oncological, haematological, and palliative-care settings: A meta-analysis of 94 interview-based studies. *The Lancet Oncology*, *12*(2), 160–174. doi:10.1016/S1470-2045(11)70002-X

Mitchell, A., Ferguson, D., Gill, J., Paul, J., & Symonds, P. (2013). Depression and anxiety in long-term cancer survivors compared with spouses and healthy controls: A systematic review and meta-analysis. *The Lancet Oncology*, *14*(8), 721–732. doi:10.1016/S1470-2045(13)70244-4

Mortensen, K., & Hughes, T. L. (2018). Comparing Amazon's Mechanical Turk platform to conventional data collection methods in the health and medical research literature. *Journal of General Internal Medicine*, *33*(4), 533–538. doi:10.1007/s11606-017-4246-0

Mullan, F. (1985). Seasons of survival: Reflections of a physician with cancer. *New England Journal of Medicine*, *313*(4), 270–273. doi:10.1056/NEJM198507253130421

Nijboer, C., Tempelaar, R., Sanderman, R., Triemstra, M., Spruijt, R. J., & Van Den Bos, G. A. (1998). Cancer and caregiving: The impact on the caregiver's health. *Psycho-Oncology*, *7*(1), 3–13. doi:10.1002/(SICI)1099-1611(199801/02)7:1<3::AID-PON320>3.0.CO;2-5

Nijboer, C., Tempelaar, R., Triemstra, M., van den Bos, G. A. M., & Sanderman, R. (2001). The role of social and psychologic resources in caregiving of cancer patients. *Cancer*, *91*(5), 1029–1039. doi:10.1002/1097-0142(20010301)91:5<1029::AID-CNCR1094>3.0.CO;2-1

Northouse, L., Templin, T., & Mood, D. (2001). Couples' adjustment to breast disease during the first year following diagnosis. *Journal of Behavioral Medicine*, *24*(2), 115–136.

Pals, J. L. (2006). Narrative identity processing of difficult life experiences: Pathways of personality development and positive self-transformation in adulthood. *Journal of Personality*, *64*, 1079–1110. doi:10.1111/j.1467-6494.2006.00403.x

Pan, Y., Yang, K., Wang, Y., Zhang, L., & Liang, H. (2017). Could yoga practice improve treatment-related side effects and quality of life for women with breast cancer? A systematic review and meta-analysis. *Asia-Pacific Journal of Clinical Oncology*, *13*(2), e79–e95. doi:10.1111/ajco.12329

Panattoni, K., & Thomsen, D. K. (2018). My partner's stories: Relationships between personal and vicarious life stories within romantic couples. *Memory*, *26*(10), 1416–1429. doi:10.1080/09658211.2018.1485947

Park, C. L., Zlateva, I., & Blank, T. O. (2009). Self-identity after cancer: "Survivor", "victim", "patient", and "person with cancer". *Journal of General Internal Medicine*, *24*(S2), 430–435. doi:10.1007/s11606-009-0993-x

Pennebaker, J. W., Mehl, M. R., & Niederhoffer, K. G. (2003). Psychological aspects of language use: Our words, our selves. *Annual Review of Psychology*, *54*(1), 547–577. doi:10.1146/annurev.psych.54.101601.145041

Recklitis, C., & Rodriguez, P. (2007). Screening childhood cancer survivors with the brief symptom inventory-18: Classification agreement with the symptom checklist-90-revised. *Psycho-Oncology*, *16*(5), 429–436. doi:10.1002/pon.1069

Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck, D. F. Hay, S. E. Hobfoll, W. Ickes, & B. M. Montgomery (Eds.), *Handbook of personal relationships: Theory, research and interventions* (pp. 367–389). Wiley.

Rozmovits, L., & Ziebland, S. (2004). What do patients with prostate or breast cancer want from an Internet site? A qualitative study of information needs. *Patient Education and Counseling*, *53*(1), 57–64. doi:10.1016/S0738-3991(03)00116-2

Salakari, M., Surakka, T., Nurminen, R., & Pylkkänen, L. (2015). Effects of rehabilitation among patients with advanced cancer: A systematic review. *Acta Oncologica*, *54*(5), 618–628. doi:10.3109/0284186X.2014.996661

Sandelowski, M. (1994). We are the stories we tell. *Journal of Holistic Nursing*, *12*(1), 23–33. doi:10.1177/089801019401200105

Sastre, M., Sorum, P., & Mullet, E. (2011). Breaking bad news: The patients viewpoint. *Health Communication*, *26*, 649–655. doi:10.1080/10410236.2011.561919

Schnur, J. B., Montgomery, G. H., Hallquist, M. N., Goldfarb, A. B., Silverstein, J. H., Weltz, C. R., Kowalski, A. V., & Bovbjerg, D. H. (2008). Anticipatory psychological distress in women scheduled for diagnostic and curative breast cancer surgery. *International Journal of Behavioral Medicine*, *15*(1), 21–28. doi:10.1007/BF03003070

Segal, J. Z. (2012). Cancer Experience and its Narration: An Accidental Study. *Literature and Medicine*, *30*(2), 292–318. doi:10.1353/lm.2012.0017

Shaffer, K., Kim, Y., & Carver, C. (2016). Physical and mental health trajectories of cancer patients and caregivers across the year post-diagnosis: A dyadic investigation. *Psychology & Health*, *31*(6), 655–674. doi:10.1080/08870446.2015.1131826

Singer, J. A. (2004). Narrative identity and meaning making across the adult lifespan: An introduction. *Journal of Personality*, *72*(3), 437–460. doi:10.1111/j.0022-3506.2004.00268.x

Singer, J. A., & Salovey, P. (1993). *The remembered self: Emotion and memory in personality*. Free Press.

Stenberg, U., Ruland, C. M., & Miaskowski, C. (2010). Review of the literature on the effects of caring for a patient with cancer. *Psycho-oncology*, *19*(10), 1013–1025. doi:10.1002/pon.1670

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, *27*(2), 237–246. doi:10.1177/1098214005283748

Thomsen, D., & Pillemer, D. (2017). I know my story and I know your story: Developing a conceptual framework for vicarious life stories. *Journal of Personality*, *85*(4), 464–480. doi:10.1111/jopy.12253

Tsianakas, V., Maben, J., Wiseman, T., Robert, G., Richardson, A., Madden, P., Griffin, M., & Davies, E. A. (2012). Using patients' experiences to identify priorities for quality improvement in breast cancer care: patient narratives, surveys or both? *BMC Health Services Research*, *12*(1), 271–282. doi:10.1186/1472-6963-12-271

Weintraub, W. (1989). *Verbal behavior in everyday life*. Springer-Verlag.

Wu, H., & Harden, J. (2015). Symptom burden and quality of life in survivorship. *Cancer Nursing*, *38*(1), E29–E54. doi:10.1097/NCC.0000000000000135

Zebrack, B. J. (2000). Cancer survivor identity and quality of life. *Cancer Practice*, *8*(5), 238–242. doi:10.1046/j.1523-5394.2000.85004.x

Zebrack, B. J., Ganz, P., Bernaards, C., Petersen, L., & Abraham, L. (2006). Assessing the impact of cancer: Development of a new instrument for long-term survivors. *Psycho-Oncology*, *15*(5), 407–442. doi:10.1002/pon.963