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Psychedelic Experiences After Bereavement Improve Symptoms of Grief: The Influence of Emotional Breakthroughs and Challenging Experiences

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ABSTRACT

Grief, a common reaction to loss, can frequently become problematic or impairing. Available treatments for prolonged grief disorder are promising but leave room for considerable improvement. Qualitative accounts of psychedelic experiences after bereavement reveal themes that parallel core components of prolonged grief disorder therapy. However, few studies have investigated the therapeutic potential of psychedelics for symptoms of grief. The present study surveyed recreational psychedelic users ($N = 363$) who had suffered a bereavement event. They reported retrospective grief symptoms before and after the psychedelic experience as well as subjective reactions to the psychedelic, including emotional breakthroughs and challenging experiences. Results indicate improvements in grief symptoms after a psychedelic experience, with a large effect size (Cohen's $d = 0.83$). The occurrence of emotional breakthroughs was positively associated with improvements in symptoms of grief, while the converse relation was observed for challenging experiences. Findings provide preliminary evidence that support the development of a psychedelic-assisted therapy protocol to target symptoms of grief. Psychedelic-assisted therapy might offer an alternative to current grief treatment options.

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Introduction

Bereavement is a nearly universal and highly stressful life event that marks a period of increased risk for developing mental and physical health problems. The loss of a loved one is associated with increased risk of physical pain (Bradbeer et al. 2003), acute cardiovascular events (Carey et al. 2014), suicidality (Guldin et al. 2017; Stroebe, Stroebe, and Abakoumkin 2005), and overall mortality (Stroebe, Schut, and Stroebe 2007). Those grieving are also more likely to experience depressive symptoms (Brent et al. 2009; Zisook and Shuchter 1993), anxiety (Prigerson et al. 1996; Shear and Skritskaya 2012), sleep disturbance (Hardison, Neimeyer, and Lichstein 2005), and increased substance use behaviors (Brent et al. 2009; Stahl and Schulz 2014).

About one in 10 adults exposed to nonviolent bereavement develop prolonged grief disorder (PGD; Lundorff et al. 2017), a persistent and impairing response to bereavement characterized by a yearning for the deceased or a preoccupation with thoughts of the deceased. Prevalence rates are even higher among those who lose a loved one to unnatural causes such as suicide, homicide, disaster, or war. A meta-analysis revealed that nearly half of those bereaved by unnatural causes develop PGD (Djelantik et al. 2020). Grief

reactions are an especially pressing concern in light of the recent COVID-19 pandemic, which has claimed nearly seven million lives to date (World Health Organization 2023). One study suggests that between 27% and 38% of those who lost a loved one to COVID-19 are at risk for PGD (Tang and Xiang 2021).

Bereavement course and treatments

Theorists view the grieving process as occurring in two stages: acute grief and integrated grief (Shear, Ghesquiere, and Glickman 2013). The former refers to the initial, often painful and consuming, response to bereavement. The bereaved person might experience disbelief, preoccupying thoughts of the deceased, yearning or longing, and sadness as well as other negative emotions such as guilt or anger (Zisook et al. 2014). Most bereaved individuals transition naturally from acute grief to integrated grief, a permanent but gentler form of grief, without intervention (Zisook et al. 2014). During integrated grief, the bereaved person increasingly reengages with the world around them and functioning is gradually restored as they adapt to a future without the decedent. The successful transition from acute grief to integrated grief hinges on acceptance of

the loss and finding new meaning in life in absence of the departed (Shear 2010).

For those who struggle with the adjustment process, research suggests that psychological treatments might help. Randomized clinical trials point to the efficacy of Prolonged Grief Disorder Therapy (PGDT; previously named Complicated Grief Treatment) for reducing symptoms of PGD (Shear et al. 2005, 2014, 2016). PGDT draws from interpersonal psychotherapy, cognitive behavioral therapy for posttraumatic stress disorder and motivational interviewing (Shear 2010). The 16-session, manualized treatment includes seven core components: psychoeducation to understand grief, managing emotions, thinking about the future, reestablishing social connections, narrating the story of death, learning to live with reminders, and connecting with memories of the deceased (Szuhany et al. 2021). This approach and comparable treatments appear to achieve statistically significant but modest improvements, and outcomes suggest room for improvement (Wittouck et al. 2011).

Psychedelic experiences after bereavement

Preliminary data suggest that psychedelic experiences could hold promise for alleviating symptoms of grief. Bereaved individuals report improvements in grief symptoms after attending an ayahuasca retreat (González et al. 2020). Physical health, psychological well-being, and social relationships also improved. These gains were maintained over a one-year follow-up period. A qualitative study that analyzed descriptions of an ayahuasca experience among bereaved individuals found that participants commonly experienced contact with the deceased, emotional confrontation and release, reorganization of one's identity, changes in the internal representation of the deceased, and personal growth (González et al. 2019).

A study investigating the therapeutic trajectories of individuals undergoing psilocybin-assisted group therapy found a 42% decrease in complicated grief symptoms after two weeks (Agin-Liebes et al. 2021). Participants were older male AIDS survivors who reported symptoms of complicated grief in response to repeated losses endured during the AIDS epidemic. Improvements were maintained at a three-month follow-up (Anderson et al. 2020). In a qualitative interview, participants reported increased emotional insight, experiential acceptance of sadness and grief that led to a deepened capacity for positive emotions such as love and joy, newfound feelings of connectedness with others, and perceiving possibilities for future growth (Agin-Liebes et al. 2021).

The themes identified in qualitative analyses of psychedelic experiences among grieving individuals parallel core components of PGDT. Like PGDT, psychedelic experiences appear to help individuals attend to emotions and cognitions regarding the deceased, reestablish social connections, and look toward the future with optimism. Moreover, PGD shares many clinical features with major depressive disorder (MDD) and posttraumatic stress disorder (PTSD; e.g., dysphoria, anhedonia, guilt, avoidance, and impairments in social functioning). Recent clinical trials point to the efficacy of psychedelic-assisted therapy for MDD and PTSD (Carhart-Harris et al. 2016; Davis et al. 2021; Jerome et al. 2020; Mithoefer et al. 2018), suggesting the potential for comparable benefits in grieving persons.

Attributes of the psychedelic experience

The occurrence of emotional breakthroughs during the acute psychedelic experience appears to play a role in therapeutic outcomes. Emotional breakthroughs, similar to the psychoanalytic concept of catharsis, involve the overcoming of difficult feelings or memories, leading to relief (Roseman et al. 2019). Emotional breakthroughs correlate with changes in well-being and often co-occur with psychological insight (Roseman et al. 2019). Emotional breakthroughs also predict reductions in depressive symptoms (Nygart et al. 2022),

Challenging experiences refer to unpleasant emotions (e.g., fear, paranoia, sadness), cognitive effects (e.g., confusion, dissociation, delusions), perceptual effects (e.g., illusions), and physiological symptoms (e.g., increased heart rate, nausea) that arise during the acute psychedelic experience (Barrett et al. 2016). The occurrence of challenging experiences is related to set and setting, intentions, and drug dose (Carhart et al. 2018; Haijen et al. 2018; Palmer and Maynard 2022). Several studies point to a negative association between challenging experiences and positive patient outcomes (Carhart et al. 2018; Haijen et al. 2018; Williams et al. 2021).

Current study

The present study investigates the impact of psychedelic experiences on symptoms of grief in a sample of recreational users. In addition, we examine how emotional breakthroughs and challenging experiences relate to changes in the severity of grief symptoms. We predicted that reductions in grief symptoms would be reported after a psychedelic experience. Given the relevance of processing difficult emotions in the grieving process, we predicted that emotional breakthroughs would be

positively associated with improvements in grief symptom severity and the converse relation for the occurrence of challenging experiences.

Methods

Participants

Participants were recruited from Amazon's Mechanical Turk, a crowdsourcing platform. The University at Albany's Institutional Review Board provided ethics approval. Participants were eligible if they were over 18 years of age and had used a psychedelic substance after experiencing symptoms of grief following bereavement. Participants were compensated \$1.00 if they passed the embedded attention check questions and reached the end of the survey.

A final sample of 363 participants were included for analyses. About half the participants were male (52.9%), 46.6% were female, and 0.3% did not report their biological sex. Participants ranged from 18 to 71 years ($M = 37.12$; $SD = 11.14$). Most participants identified as White (77.4%), 6.3% identified as Black or African American, 6.1% identified as Hispanic or Latinx, 5.2% identified as Asian or Pacific Islander, 4.1% identified as multiracial, 0.3% identified as Native American or Alaskan Native, and 0.6% did not report their ethnicity.

Procedure

Participants were instructed to think about a specific time they used a psychedelic drug after experiencing grief symptoms following the death of a loved one. If this occurred on more than one occasion, participants were asked to recall the instance in which they were most impacted by the bereavement. Participants responded to all items with this one event in mind.

Measures

Participants reported the type of psychedelic used, if they had ever used that particular psychedelic before this event, and if they had ever used any psychedelics before this event. The most common psychedelic substances used were psilocybin (30.3%), lysergic acid diethylamide (LSD; 23.4%), and 3,4-methylenedioxy-methamphetamine (MDMA; 18.7%). About half the participants (50.1%) had prior experience with the same substance before this event, and 61.1% had prior experience with any psychedelic before this event. Participants also reported how long ago the event occurred, if they used the psychedelic with the intention to address their grief, and if they used the psychedelic

alone or in a group. The event occurred within the last five years for most participants (70.2%). Most participants endorsed using the psychedelic with the intention to address their grief (84.8%) and underwent the experience alone (57.6%). Details appear in Table 1.

Participants completed the Emotional Breakthrough Inventory (EBI; Roseman et al. 2019). The questionnaire comprised six items rated on a visual analogue scale from 0 (no, not more than usually) to 100 (yes, entirely or completely). Items were summed to produce a total EBI score ($M = 382.67$, $SD = 122.57$, range = 0–600). Internal consistency was acceptable (Cronbach's $\alpha = .83$).

A subset of the Challenging Experience Questionnaire (CEQ; Barrett et al. 2016) was used to assess challenging psychological experiences that occurred during the acute effects of the psychedelic trip. We used three of the seven subscales (insanity, fear, and grief) in consideration of the length of the survey and participant burden. Prior work indicates a positive link between these three factors and the perceived difficulty of a psychedelic experience (Barrett et al. 2016). Fourteen items were rated on a six-point Likert-type scale from 0 (none, not at all) to 5 (extreme, more than ever before in my life). Items were summed to produce a total CEQ score ($M = 29.40$, $SD = 18.90$, range = 0–70). Internal consistency was acceptable (Cronbach's $\alpha = .96$).

An adapted version of the Prolonged Grief 13 Revised (PG-13-R; Prigerson et al. 2021) assessed grief symptoms. Participants reported the severity of their grief symptoms before and after their psychedelic experience (e.g., "Did you feel yourself longing or yearning for the person you lost *prior to using the psychedelic?*" and "Did you feel yourself longing or yearning for the person you lost *after using the psychedelic?*"). Participants rated eleven items on a five-point Likert-type scale from 1 (not at all) to 5 (overwhelmingly). Items were summed to produce a total score representing the severity of grief symptoms. Internal consistency was acceptable (Cronbach's $\alpha = .91$ prior to using the psychedelic, and $.92$ after using the psychedelic). Participants were queried about the presence of functional impairment before and after their psychedelic experience. Participants responded "yes" or "no" to the following items: "Did the symptoms above cause significant impairment in social, occupational, or other important areas of functioning *prior to using the psychedelic*" and "... *after you used the psychedelic.*" The PG-13 item assessing the time criterion to meet the diagnostic threshold for prolonged grief disorder was omitted.

Five attention check items were embedded in the survey to identify careless responding (e.g., "I felt pain in the sixth toe of my right hand"). Participants who

Table 1. Characteristics of psychedelic use event following bereavement.

	N	%
Type of psychedelic		
Psilocybin	110	30.3
LSD	85	23.4
MDMA	68	18.7
Ketamine	25	6.9
Peyote	19	5.2
DMT	10	2.8
Mescaline	10	2.8
Salvia Divinorum	10	2.8
Ayahuasca	8	2.2
PCP	7	1.9
Ibogaine	2	0.6
Did not report	9	2.5
Used this psychedelic before		
Yes	182	50.1
No	180	49.6
Did not report	1	0.3
Used any psychedelic before		
Yes, less than 5 times	131	36.1
Yes, five to 10 times	39	10.7
Yes, more than 10 times	52	14.3
No	141	38.8
How long ago		
Less than 1 year ago	77	21.2
1 to 3 years ago	101	27.8
3 to 5 years ago	77	21.2
More than 5 years ago	108	29.8
Intention to address grief		
Yes	308	84.8
No	55	15.2
Alone or in a group		
Alone	209	57.6
Group	154	42.4

failed to respond appropriately were not included in the data analyses ($n = 2904$). Prior work suggests that such attention checks can decrease error variance and improve correlations among indicators of the same construct (Meade and Craig 2012).

Results

Missing values for each of the outcome measures were 1% or less. A missing values analyses revealed that data was missing completely at random. Skews on participants' age and EBI total scores were greater than $|.8|$. A square root transformation was applied to these variables. Standardization and Mahalanobis distance indicated no univariate or multivariate outliers.

Changes in grief symptoms

Grief change scores were calculated by subtracting grief scores after the psychedelic experience from grief scores prior to the psychedelic experience. On average, grief symptoms improved by 20.43% ($SD = 38.29$) after the psychedelic experience. A paired samples t-test revealed that post-psychedelic grief severity ($M = 25.38$, $SD = 9.16$, range = 10–50) was significantly lower than pre-

psychedelic grief severity ($M = 33.97$, $SD = 9.98$, range 10–50), $t(344) = 15.50$, $p < .05$, Cohen's $d = 0.83$. In our sample, 78.3% of participants reported improvements in grief symptoms after the psychedelic experience. Eleven percent of participants reported no changes and 10.7% saw a worsening of grief symptoms following the psychedelic experience. About half of participants (49.9%) reported impairment prior to the psychedelic experience and less than a third (30.3%) reported impairment after the psychedelic experience.

Emotional breakthrough and challenging experiences

Mean EBI score was 382.67 ($SD = 122.57$, range = 0–600) and mean CEQ score was 29.40 ($SD = 18.90$, range = 0–70). Improvements in grief symptoms were positively correlated with emotional breakthroughs ($r(338) = .25$, $p < .05$) and negatively correlated with challenging experiences ($r(326) = -.20$, $p < .05$). Experiencing more or stronger emotional breakthroughs during the psychedelic trip was linked to greater improvements in grief symptoms, while more challenging experiences were associated with less improvement in grief symptoms.

A multiple linear regression tested if emotional breakthroughs and challenging experiences significantly predicted changes in grief symptoms, after controlling for age, sex, intention to address grief, how long ago the event occurred, and severity of grief symptoms prior to the psychedelic experience. Binary variables were coded $-.5$ and $.5$ and continuous variables were median centered before analysis to reduce errors in statistical inference (Kraemer and Blasey 2004). The model was significant, $F(7,311) = 27.91$, $p < .05$, $R^2 = .39$. Only sex (coded $-.5$ for males and $.5$ for females; $t = -2.74$, standardized $\beta = -.13$, $p < .05$) and severity of grief symptoms prior to the psychedelic experience ($t = 11.33$, standardized $\beta = .58$, $p < .05$) emerged as significant covariates. Emotional breakthrough experiences ($t = 3.28$, standardized $\beta = .15$, $p < .05$) and challenging experiences ($t = -8.93$, standardized $\beta = -.43$, $p < .05$) significantly predicted changes in grief symptoms.

In addition, independent samples t-tests compared changes in grief symptoms, CEQ scores, and EBI scores between participants who used a classic psychedelic (LSD, psilocybin, ayahuasca, DMT, peyote, and mescaline) and participants who used other psychedelics (MDMA, ketamine, Salvia divinorum, PCP, ibogaine, and other). Results revealed no significant differences between these two groups across all three variables.

Discussion

A community sample rated the severity of their grief symptoms (as they recalled) before and after a psychedelic experience. Participants also rated the occurrence of emotional breakthrough experiences and challenging experiences during the psychedelic experience. We hypothesized that a psychedelic experience after bereavement would be associated with a reduction in the severity of grief symptoms. We also predicted that emotional breakthrough experiences would be linked to greater improvement in grief symptoms while challenging experiences would be linked to less improvement in grief symptoms. All hypotheses were supported.

About eight in 10 individuals reported improvements in grief symptoms after their psychedelic experience. Post-psychedelic grief severity was significantly lower than pre-psychedelic grief severity, with a large effect size (Cohen's $d = 0.83$). On average, the severity of grief symptoms decreased by about 20%. Few studies have investigated the therapeutic potential of psychedelic experiences on symptoms of grief. PGD was recently included in the DSM-5-TR and as clinicians officially recognize the condition, the need for effective treatment options will likely grow more obvious. Currently

available psychotropic medications have not been efficacious for the treatment of PGD (Shear et al. 2016; Zisook and Shear 2009) and a meta-analysis of psychological treatments revealed effect sizes smaller than those common for treatments of other mental health disorders (pooled standardized mean difference = $-.53$; Wittouck et al. 2011). Manualized psychological interventions also require a lengthy treatment process of up to 16 sessions (Wittouck et al. 2011). In our study, substantial improvements in grief symptoms were reported after a single psychedelic experience. These findings are in line with investigations of psychedelic-assisted therapy for other mental health conditions, which point to rapid, robust, and enduring effects (e.g., Palhano-Fontes et al. 2019; Ross et al. 2016). Pending more thorough investigation, the development of a psychedelic-assisted therapy protocol to target symptoms of grief might offer an alternative to current treatment options.

Results also reveal the import of specific attributes of the psychedelic experience. Higher ratings of emotional breakthrough experiences were positively correlated with improvements in grief severity while the converse relation was observed for challenging experiences. Both emotional breakthrough experiences and challenging experiences were significantly associated with changes in grief symptoms. To our knowledge, researchers have yet to examine either construct in studies of psychedelic experiences among bereaved individuals. Findings suggest that psychedelic-assisted treatment protocols for the treatment of grief should emphasize the processing of emotional content during the guided administration stage and care must be taken to minimize challenging experiences. To limit the length of the survey, only a subset of the CEQ was used to measure challenging experiences. Future studies including all subscales in the CEQ might offer a more detailed picture of how different types of challenging experiences relate to changes in grief symptoms.

While the majority of participants reported positive effects on grief symptoms after the psychedelic experience, 11% reported no changes in grief symptoms and 10.7% saw a worsening of grief symptoms. First, important contextual factors related to the psychedelic event (e.g., set and setting, dosage, drug type; Carhart et al. 2018) might explain these results. Given that our sample comprised recreational users, their environments might have included undesirable elements that undermined potential benefits. Among grieving individuals who attended an ayahuasca retreat, the psychedelic experience had no influence on grief symptoms in 5.1% of participants and 2.6% experienced a worsening of symptoms (González

et al. 2020). The lower proportion of participants who did not benefit in a more structured setting underscores the importance of contextual factors (Ayahuasca ceremonies frequently have formal songs, prayers, and social support that appear less often during the use of other psychedelics; González et al. 2020). Second, personal factors related to the individual and bereavement event might also have influenced outcomes. In our study, we did not gather information such as the nature or quality of the relationship between participants and the deceased, circumstances of the death, or the presence of other comorbid diagnoses. Future studies should examine these variables to reveal a more nuanced profile of those most likely to benefit.

Several other limitations in our study suggest future work. Our sample comprised recreational users and over half of participants reported using psychedelics prior to the incident associated with the bereavement. Recurrent use suggests that these participants might have had previous positive experiences, so that expectancy effects could have influenced to our results. Future studies could measure and control for participants' previous use, pre-existing attitudes, and outcome expectancies. In addition, over three quarters of our sample was White. Bereavement services appear particularly limited in underrepresented groups (Selman et al., 2023). Relevant psychedelic research on people of color could also improve (Michaels et al. 2018). Survey research reveals improved mental health after using psychedelics for those who have experience racial trauma, and some racial trauma symptoms parallel those associated with bereavement (Williams et al. 2021). Future research that includes larger samples with higher proportions of participants from underrepresented groups would improve the generalizability of our findings.

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