

ABSTRACT

Title of Thesis: DISENFRANCHISED VICTIMS OF THE OPIOID EPIDEMIC:
PREDICTING GRIEF AND GROWTH AFTER AN OPIOID-
RELATED LOSS

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Over 75,000 people died from opioid drug overdoses between April of 2020 to April of 2021, compared to 46,000 deaths in 2018 (CDC, 2021; Wilson et al., 2020). Left behind are family members, significant others and friends struggling with grief as opioid-related losses are highly stigmatized and disenfranchised. Theoretically informed by the model of resilience (Mancini & Bonanno, 2009), as well as the transactional model of stress, appraisal and coping (Lazarus & Folkman, 1984), this study examined the role of disenfranchised grief, social support, and coping in prolonged grief and posttraumatic growth among a sample (n = 159) of people bereaved by the loss of a family member, romantic partner or friend due to an opioid-related death. Together, disenfranchised grief, social support, and coping predicted 43% of the variance in prolonged grief and 36.6% of the variance in posttraumatic growth. Specifically active emotional coping

predicted unique variance in both outcomes. Findings from this study have important implications for research and clinical practice to improve grief outcomes for this unique yet extensive population.

DISENFRAANCHISED VICTIMS OF THE OPIOID EPIDEMIC:
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by

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**Disenfranchised Victims of the Opioid Epidemic:
Predicting Grief and Growth after an Opioid-Related Loss**

Introduction

Over 75,000 people died from opioid drug overdoses between April of 2020 to April of 2021, compared to 46,000 deaths in 2018 (CDC, 2021; Wilson et al., 2020). Additionally, over 40 U.S. states reported increases in opioid-related deaths during the COVID-19 pandemic (American Medical Association). Left behind are family members, significant others and friends struggling with grief as opioid-related losses are highly stigmatized and disenfranchised (i.e., not acknowledged, publicly mourned, or socially supported; Doka, 1989; McGinty et al., 2019; Tsai et al., 2019; Valentine et al., 2016). Disenfranchised grief leads to negative psychological outcomes and reduced posttraumatic growth among the bereaved (Anderson & Gaugler, 2006; Doka, 2008; Sauber & O'Brien, 2020). People who are grieving a loss from a stigmatized death, such as an overdose, have higher rates of depression, prolonged grief, and other mental health difficulties than people grieving a death due to natural/accidental causes (Feigelman et al., 2011; Bottomly et al., 2021). Theoretically informed by the model of resilience (Mancini & Bonanno, 2009), as well as the transactional model of stress, appraisal and coping (Lazarus & Folkman, 1984), this study examined the role of disenfranchised grief, social support, and coping in prolonged grief and posttraumatic growth among those who are grieving the loss of a family member, romantic partner or friend due to an opioid-related death. Findings from this study will inform future research and clinical practice to improve grief outcomes for this unique yet extensive population.

Opioid-Related Deaths

The opioid epidemic in the United States caused a staggering number of deaths over the past two decades (CDC, 2020a; CDC 2020b). Opioids represent a family of substances that act on opioid receptors in the brain and spinal cord. Opioids include prescription pain relievers, heroin, and synthetic opioids such as fentanyl. In 2018, 128 people died every day from an opioid overdose (Wilson et al., 2020) and the rate of opioid-related deaths is increasing at a staggering rate. About 74% of people who die from an opioid-related death are between 25 and 54 years old (CDC, 2020b). The reported 12-month opioid death count from April 2020 to April 2021 was 75,673. This represents a drastic increase of 34.98% from the year before, when there were 56,064 reported deaths (CDC, 2021), and an increase of 60.44% from March 2018 to March 2019, when there were 47,165 (Ahmed et al., 2010). From 1999-2019, nearly 500,000 people died from an overdose including an opioid (CDC, 2020b). Fentanyl, which is up to 100 times more potent than morphine, is a main driver of opioid-related deaths. There has been a 14-fold increase in deaths from synthetic opioids (mainly fentanyl) since 2012 (CDC, 2020b; Higashikawa & Suzuki, 2008; Volpe et al., 2011).

Approximately 21 to 29% of people who are prescribed opioids to treat chronic pain use them differently than prescribed and between 8 and 12% develop an addiction to opioids (Vowles et al. 2015). Prescription opioid addiction is concentrated in U.S. states that have large rural populations. States with the highest rates of prescription opioid overdose deaths include West Virginia, Delaware, and Maryland; almost the entire Appalachian corridor of states from Maine to Kentucky has opioid overdose death rates far exceeding the national average (CDC). Rural regions may be disproportionately affected by this epidemic for a number of reasons, including greater opioid prescription and availability in these regions due to older populations,

out-migration of young adults, greater rural social network connections which facilitate distribution, and economic stressors that create vulnerability to drug use and opioids being used in non-prescribed ways (Keyes et al., 2014).

People who experience opioid addiction face stigma from multiple domains, including stigma related to opioid use from chronic pain, interpersonal and structural stigma toward people using opioid agonist therapy, stigma enacted by healthcare professionals, and even self-stigma (McCradden et al., 2019). News media also is a significant source of stigmatization; about half of published American news stories about the opioid epidemic published from 2008 to 2018 used a stigmatizing term, reinforcing widespread public stigma (McGinty et al., 2019). This cumulative stigma results in significant marginalization and devaluation of this population (Tsai et al., 2018). Stigma is one of the most commonly reported reasons for not seeking treatment for a substance use disorder, and negative attitudes toward people with opioid use disorders create myriad barriers to passing preventative healthcare policies and access to treatment (Montalvo et al., 2019; Tsai et al., 2018).

Due to the high fatality rate associated with opioid use, the family members, friends, and romantic partners of people with opioid use disorders are highly vulnerable to loss. In 2018, a public opinion poll by the American Psychiatric Association found that 31% of Americans knew someone who had an addiction to opioids or prescription painkillers. Surprisingly, there is a paucity of studies in the grief literature examining the experiences of those who experienced the death of a significant individual from drug use despite the high prevalence of this type of loss; very few studies have quantitatively focused on those bereaved by an opioid death, and no studies have quantitatively examined constructs such as coping, posttraumatic growth, social support, and disenfranchised grief in those bereaved by an opioid death (Bottomley et al., 2021;

Feigelman et al., 2011; Guy, 2004). The marginalization of people who die from opioid-related deaths may affect their grieving family members/friends in unique and adverse ways, potentially leading to negative grief outcomes. Additionally, people bereaved by opioid-related deaths may be at heightened risk for substance use, perhaps because of the availability of the substance, the risk of using substances to manage their grief, or both (Parisi et al., 2019). Thus, investigating the grief outcomes for this population could be essential to reducing substance use among the bereaved.

Theoretical Framework

Two related models of grief guided the current study: the model of resilience (Mancini & Bonanno, 2009) and the transactional model of stress, appraisal and coping (Lazarus & Folkman, 1984). These models account for a wide diversity of grief processes and are useful in conceptualizing grief for unique populations such as those bereaved by an opioid related loss.

Model of Resilience

The model of resilience (Mancini & Bonanno, 2009) states that many different factors impact the coping strategies that one uses, which influence the grief outcome, such as resilience, that someone experiences. This model, also called the individual differences model, posits that the individual traits that make up a person, such as personality, *a priori* beliefs, and identity are influential to the way in which individuals cognitively appraise a loss, receive social support, and cope (Figure 3).

This model also states that the quality and type of social support that a griever receives has an impact on the coping strategies that one uses. For example, availability of emotional social support may facilitate emotion-focused coping strategies. Social support is also hypothesized to have a bidirectional relationship with cognitive appraisal in this model; thus, if a

person has strong existing social support systems, they may appraise a loss event to be less harmful than someone who does not have strong existing social support systems.

Another important component of this model suggests that exogenous resources, such as financial resources, physical health, and cultural beliefs and practices, have an effect on social support. This component is especially relevant for people who are bereaved by an opioid-related death because the cultural perception of an opioid-related death is highly stigmatized, so this population may be less likely to access or receive social support.

The potentially negative impact on social support may then impact the coping resources and strategies that the griever utilizes, thus affecting their level of resilience. Applying this model to people bereaved by an opioid-related death helps to clarify the relationship between the negative cultural attitudes that surround people who die as a result of opioid use and the grief outcomes experienced by people who grieve them.

Transactional Model of Stress, Appraisal and Coping

Coping strategies help to manage the external or internal demands of a stressful situation. The transactional model of stress, appraisal and coping (Lazarus & Folkman, 1984) states that one's cognitive appraisal of a stressful situation influences which strategies they use to cope. According to the model seen in Figure 4, individuals appraise an event in four ways: threat, harm, challenge, and benefit. This appraisal then determines the emotional response to the event, which then, along with knowledge of what coping strategies are available, determines the coping strategies employed. The relationship between coping and emotion is bi-directional, as the coping strategies used mediate the emotional response to the event, and the emotions influence the coping strategies used by the individual.

According to this model, coping can be emotion-focused or problem-focused (Lazarus & Folkman, 1984). Emotion-focused strategies often are used when the appraisal indicates that there is nothing that can be done to change the stressful event, and emotional regulation may be needed to minimize distress. This can include using humor, venting, or seeking emotional support from others. Problem-focused coping may be used when individuals believe that they can alter the stressor, and so they utilize coping strategies that function to manage the problem causing the distress (Folkman, 2013). Examples of problem-focused coping may include making plans such as memorial proceedings, getting instrumental support from others, or taking action to improve the situation. Problem-focused coping and emotion-focused coping may serve similar functions, for example, if regulating a distressing emotion allows for the accomplishment of a task, or if solving a problem reduces anxiety related to that problem. This model partially explains why individuals may choose one coping strategy or style over another when confronted with a death. It also presents coping as a determinant of emotional response to an event, which helps explain why varied coping strategies, such as turning toward your support system, may relate to posttraumatic growth or prolonged grief after a death.

These models highlight the significance of the constructs of interest in the present study (i.e., disenfranchised grief, social support, and coping style), with regard to the grief outcomes of prolonged grief and posttraumatic growth. Applying these models to a uniquely grieving population, such as people grieving an opioid death, serves to advance understanding regarding the relationship between grief predictors and grief outcomes.

Predictors of Grief Outcomes

Disenfranchised Grief

Disenfranchised grief is grief that is not acknowledged, publicly mourned, or socially supported. The term, disenfranchised grief, was originally coined to describe the grief experiences of people who are faced with the death of an ex-spouse (Doka, 1989). Grief disenfranchisement may take the form of actions like someone being left out of memorial proceedings, not being notified of the death right away, not being taken seriously in one's grief, or being expected to have no grief response at all. Grief disenfranchisement often occurs for children and for people with developmental disabilities (Doka, 1989).

Disenfranchisement of grief can worsen negative outcomes (Doka, 2008). How we define a "good" or "bad" death is largely cultural (Seale, & Van der Geest, 2004) and "bad deaths," such as deaths related to drug use or deaths by suicide, may be met with less public empathy for the deceased and sympathy for the bereaved (Feigelman et al., 2011, Guy et al., 2004). Thus, the concept of disenfranchised grief has been widened to include deaths that are thought to be self-inflicted, including deaths related to substance use (Guy, 2004).

Public disapproval of people who die due to opioid use disorders may impact both the way support is given to the bereaved and the way the bereaved feel comfortable (or not) reaching out for support. For example, this stigmatization may cause the bereaved person to lie about the cause of death, as was observed in one qualitative study of those bereaved from opioid deaths (Templeton et al., 2018). People bereaved from deaths related to substance use may experience stigma from many different sources. One study found that people bereaved from drug- and alcohol-related deaths reported being met with stereotypes, judgement, disgust, and cold professionalism from practitioners like health care providers and law enforcement officers during

the death proceedings (Walter et al., 2017). These experiences culminate in stigmatization of the death and subsequent grief. It may be more likely that parents of children who died from overdoses receive blaming comments from others, whereas this typically is not reported with other causes of death. People bereaved from opioid-related deaths may also experience feelings of helplessness, guilt and self-blame if they struggled to support their family member/romantic partner/friend during their life (Valentine & Walter, 2015). The stigmatization associated with drug-related deaths is related to higher rates of prolonged grief (Feigelman et al., 2011).

Social Support

Social support, as defined by Ogrodniczuk et al. (2003), is “help that is available from or provided by one’s friends and family that facilitates the individual’s ability to cope with a stressful life event (e.g., a death loss).” Early research noted the multidimensional nature of social support. Social support may be categorized as emotional (e.g., having someone to give you reassurance), tangible (e.g., direct aid or services, such as prepping dinner), or informational (e.g., giving advice or providing feedback). The size of someone’s support network may also be related to the level of support they receive (Burke et al., 2010; Rainie & Wellman, 2012). The research on the effect of social support on grief is mixed and can vary by sample and outcome measure. Burke and colleagues found that in a sample of African Americans bereaved by a homicide death, the number of supportive people available to the bereaved was negatively correlated with complicated grief (2010). A qualitative study with a sample of adults grieving a family member or friend who died because of substance use highlighted that participants generally reported feeling isolated and that accessing support was difficult (Templeton et al., 2016). The sample also reported feeling very stigmatized, which may potentially impact the way they sought or received support from their networks. Disenfranchised grief also was found to be

negatively associated with social support (Sauber & O'Brien, 2020). The current study aimed to improve understanding of the role and quality of support received by populations bereaved by opioid deaths.

Coping style

One's coping style refers to processes, strategies, or styles of managing (reducing, mastering, tolerating) the situation in which bereavement places the individual (Carver, 1997). Coping styles have been studied over the last few decades, with many ways to conceptualize the different types of coping. One popular categorization of coping styles is Lazarus and Folkman's dichotomy of problem-focused coping compared to emotion-focused coping. Holahan and Moos then further divided emotion-focused coping into active emotional coping and avoidant emotional coping (1987). Strategies that would be considered active emotional coping, such as venting or positive reframing, have been thought of as advantageous strategies, while avoidant emotional coping strategies, such as self-blame or behavioral disengagement, have been thought of as maladaptive (Carver, 1997; Holahan & Moos, 1987; Lazarus & Folkman, 1984; Schindler et al., 2007). The coping style a person employs in a given situation depends on a variety of factors and can influence the type of outcome that follows the stressful life event (Folkman & Lazarus, 1985; Mancini & Bonanno, 2009; Stroebe et al., 2001). Avoidant emotional coping has been linked to higher levels of prolonged grief when compared to active emotional coping and problem-focused coping (Schindler et al., 2007).

Grief Outcomes

Prolonged Grief

Prolonged grief, or prolonged grief disorder is a negative grief outcome categorized by intense emotions and grief symptoms that present after a death and last longer than typical grief

reactions (Prigerson et al., 2009). Prolonged grief disorder is diagnostically similar to the condition recognized in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.) as Persistent complex bereavement disorder, which is defined by a “severe and persistent grief and mourning reaction,” but the diagnostic criteria for persistent complex bereavement disorder has been criticized for being less empirically supported than the proposed criteria for prolonged grief disorder (American Psychiatric Association, 2013; Maciejewski et al., 2016; Prigerson et al., 2009). The diagnostic criteria for prolonged grief disorder in the World Health Organization International Classification of Diseases, the proposed criteria set forth for inclusion in the DSM-5 by the American Psychiatric Association and the psychometrically validated criteria originally set forth by prominent prolonged grief disorder researchers, Prigerson and colleagues, all differ slightly, but they share many common components, including difficulty moving on from the loss, intense yearning for with the person who died, and clinical distress that is not explained by another mental disorder (Boelen et al., 2020; Eisma et al., 2020; Prigerson et al., 2009; World Health Organization [WHO], 2018). Researchers have upheld the Prigerson criteria as having the most specificity and empirical validity (Boelen et al., 2020). Prolonged grief disorder diagnoses require that six months have passed since the death.

With regard to prevalence, a Danish metanalysis found that 9.8% of people who are grieving a death experienced prolonged grief disorder (Lundorff et al., 2017). A risk factor for prolonged grief is the lack of emotional support sometimes associated with traumatic events (Stewart, 1999). People who lost a child to a drug-related death or a death by suicide show higher rates of prolonged grief than people who lost a child to more typical, expected causes of death (Feigelman et al., 2011). Additionally, prolonged grief was positively associated with substance use (Parisi et al., 2019).

Posttraumatic Growth

Posttraumatic growth can be defined as the experience of positive change that happens as a result of a highly challenging life event, such as the death of a loved one (Tedeschi & Calhoun, 2004). Posttraumatic growth might take the form of having a greater appreciation for life, feeling closer to your loved ones, feeling increased personal strength, experiencing positive spiritual change, and having a sense of new possibilities ahead (Tedeschi & Calhoun, 1996). It is not just the trauma, but the actual struggle in the aftermath of trauma that determines the extent to which posttraumatic growth occurs (Tedeschi & Calhoun, 2004). The likelihood that a person experiences posttraumatic growth may be related to how they form cognitions about their trauma (Tedeschi & Calhoun, 2004). This concept is supported by the transactional model of stress, appraisal and coping, as cognitive appraisal partially determines how someone copes with a stressful life event (Folkman & Lazarus, 1984). Experiences of posttraumatic growth are relatively common; 52.58% of people who suffered a traumatic life event reported moderate-to-high experiences of posttraumatic growth (Wu et al., 2019). While posttraumatic growth has not been studied in populations bereaved by opioid deaths, posttraumatic growth was correlated negatively with disenfranchised grief among women who were grieving the death of a close female friend (Sauber & O'Brien, 2020), suggesting that those bereaved by a highly stigmatized loss such as an opioid death may not experience posttraumatic growth.

Summary

The aim of this study was to explore the predictors of grief outcomes for people who are grieving an opioid-related death. This population has been neglected by the literature and is at risk for negative outcomes given the stigmatization of people with opioid use disorders. Disenfranchised grief, social support, and coping style have been linked to grief outcomes such

as prolonged grief and posttraumatic growth, but the relationships among these constructs had yet to be examined in this unique population. We hypothesized that disenfranchised grief, social support, and avoidant emotional coping would contribute to the prediction of prolonged grief, while disenfranchised grief, social support, and problem-focused coping/active emotional coping would contribute to the prediction of posttraumatic growth. We also hypothesized that high levels of disenfranchised grief, low levels of social support, and high levels of avoidant emotional coping would be associated with prolonged grief, while low levels of disenfranchised grief, high levels of social support, and high levels of problem-focused coping/active emotional coping would be associated with posttraumatic growth. The findings from this study could serve to advance understanding of the predictors of grief outcomes, while also shedding light on the nuanced, overlooked experience of those grieving important individuals who had been devalued and marginalized on the basis of their opioid use disorder. The results of this study can inform future grief interventions and create awareness surrounding the negative effects of grieving deaths due to opioid use.

Method

Participants

An *a priori* statistical power analysis, using G*POWER v3 software (Faul et al., 2007), was calculated to determine the total number of participants needed to achieve statistical power of 0.95, a medium effect size ($f^2 = 0.3$), with an overall $\alpha = 0.05$. The suggested sample size was 62 participants for one multiple linear regression. Because we calculated two multiple linear regressions, an estimated 124 participants were needed. The inclusion criteria for the study included having a family member/friend/romantic partner die due to opioid use between 6 and 24 months ago. This time frame was selected so that symptoms of prolonged grief disorder could be

theoretically distinguished from normative grief reactions (this may occur at six months; Prigerson et al., 2009), yet the death was still recent so as to reduce the need for participants to retroactively recall aspects of their experience years after the loss. Participants also needed to reside in the United States.

Four hundred and forty people accessed the survey. Participants were removed if their responses were fraudulent (n = 173), they did not meet the eligibility criteria (n = 47), they did not start the survey (n = 6), they did not complete at least 85% of the survey (n = 5), they provided incorrect answers to a validity check item (n = 44), or if they took less than 7.5 minutes to complete the survey (n = 6; see Figure 5). Our final sample consisted of 159 adult family members, romantic partners, and friends of someone who died from opioid-related causes between 6 and 24 months ago.

Participants' ages ranged from 18 to 74 (M = 41.01, SD = 16.86). The sample primarily identified as women (84.9%), with 11.9% men, 1.9% non-binary, and 1.3% not disclosing gender. The majority of participants were grieving the deaths of family members (74.5%), then friends (16.4%). Grieving the death of a romantic partner was least common at 8.8%. The sample was primarily White (88.1%), representing diverse economic backgrounds (i.e., 54% of the sample had a household income below \$79,999). A detailed breakdown of income can be found in Table 1. On a 7-point Likert scale asking participants about the degree to which they struggle with substance use themselves, 71.1% endorsed 1 ("not at all") while 27.6% endorsed numbers above 1. Measured using eight seven-point Likert items adjusted from the Perceived Stigma of Addiction Scale by Luoma et al. (2010), participants held low levels of stigmatizing attitudes toward people with a substance use disorder (M = 19.20, SD = 10.11). Additionally, participants were asked to "Visualize the grief process as a bridge that is 10 miles long. When you experience

a loss, the bridge has to be crossed before you can reinvest emotional energies and fully engage with your life. With that in mind, where on the bridge are you now? See the picture below to visualize the 10-mile mourning bridge.” This question was used to assess generally where participants subjectively felt they were in their grieving process. Participants reported that they were, on average, 5.74 miles into their mourning bridge, which ranged from one to ten miles ($SD = 2.18$).

Procedure

After receiving approval from the University Institutional Review Board, participants were recruited through the University Psychology subject pool, personal contacts, listservs, support groups, university classes and community organizations. Flyers were distributed at advocacy and memorial events honoring International Overdose Awareness Day throughout Maryland and the District of Columbia. Individuals who were interested in participating in the study were provided with a link to an online Qualtrics survey. Participants who were recruited online submitted an eligibility screener via Qualtrics, and eligible submissions who were determined not to be automated bots were sent access to the full Qualtrics survey.

The consent form indicated that participants could stop participating in the research or leave and come back to the survey at a later time if they felt distressed. After providing informed consent, participants completed a survey consisting of several quantitative measures assessing disenfranchised grief, social support, coping, prolonged grief, and posttraumatic growth, as well as an optional set of open-ended questions that invited participants to share more about their grief experience. Demographic information was collected, including items assessing closeness between the participant and the deceased, frequency of communication between the participant and the deceased prior to the death, as well as participants’ internalized stigmatization of people

who have been treated for a substance use disorder. Participants received course credit or a \$20 Amazon gift card after completion of this study. The survey also provided grief-related resources to the participants.

Measures

Disenfranchised Grief. The Witnessing of Disenfranchised Grief Measure is a 22-item unidimensional measure that assesses the degree to which participants felt their loss was disenfranchised (St. Clair, 2013). In creating this measure, researchers conceptualized disenfranchised grief to be a loss that is poorly witnessed by others and not acknowledged (St. Clair, 2013). Items asked participants to consider the degree to which they felt that they had a witness to their loss who lets them know they have the right to grieve (e.g., “The witness understood the full extent of my loss.” and “Without the witness, I would have carried the emotional pain of my loss alone”). Following methods by Sauber and O’Brien (2020), the word “witness” in each item was replaced with the phrase “people in my life” or “the people in my life” to clarify items. The scale directions were shortened to remove mention of a specific witness and were made more specific to an opioid-related death.

Participants were asked to rate each statement on a 5-point Likert scale, ranging from strongly agree to strongly disagree. The measure was originally scored so that high scores indicated that the grief was witnessed by others, but for the purposes of this study, scale scores were reversed so that high scores indicate strong levels of disenfranchisement. The estimated reliability coefficient was .91 (St. Clair, 2013). In a more recent sample of 148 women grieving the death of a close female friend, support was found for the reliability of the measure ($\alpha = .95$; Sauber & O’Brien, 2020). In this study, the reliability estimate was .92.

In a sample of bereaved adults ($N = 201$), this measure had high inter-item correlations and disenfranchised grief scores were associated positively with number of grief symptoms as measured by the Texas Revised Inventory of Grief, as hypothesized.

Coping Style. The Brief COPE (Carver, 1997) is a 28-item measure of coping strategies. It was shorted from the more extensive COPE inventory (Carver et al., 1989). Participants were asked to rate each statement on a 4-point Likert scale (1 = *I haven't been doing this at all*; 4 = *I've been doing this a lot*). The original measure contains 14 subscales of different coping styles (2 strategies per style) such as denial (“I’ve been saying to myself “this isn’t real”), humor (“I’ve been making jokes about it”), and acceptance (“I’ve been learning to live with it”). The 14 subscales were grouped into three coping styles, active emotional coping (positive reframing, acceptance, humor emotional support and venting scales), avoidant emotional coping (self-distraction, behavioral disengagement, self-blame, substance use, and denial scales), and problem-focused coping (active coping, instrumental support, planning, and religion scales), following the methods of past researchers (e.g., Drapeau et al., 2016; Sauber & O’Brien, 2020; Schnider et al., 2007). Item responses for each subscale were summed to produce a measure of each coping style. High scores on the three coping style subscales indicated considerable use of that coping style.

In a sample of 148 women grieving the death of a close female friend, adequate reliability was found for these subscales (problem-focused, $\alpha = .77$; active emotional, $\alpha = .81$; avoidant emotional, $\alpha = .88$; Sauber & O’Brien, 2020). The reliability estimates in the current study were .84 for problem-focused, .72 for active emotional, and .77 for avoidant emotional. Support for validity was found for this scale as an exploratory factor analysis yielded nine factors, together accounting for 72.4% of the variance in responses (Carver, 1997). Support for convergent

validity was found in a sample of 418 suicide-bereaved adults; scores on the problem-focused and active emotional coping subscales were associated positively with scores on a measure of help seeking (Inventory of Attitudes Toward Seeking Mental Health Services) while the avoidant emotional coping subscale score was associated negatively with the total score on the social support measure (Drapeau et al., 2016).

Social Support. The Medical Outcomes Study Social Support Survey (Sherbourne & Stewart; 1991) is a 19-item measure of statements describing different types of social support. Participants were asked to rate how often have each type of social support been available to them after their loss on a 5-point Likert scale (1 = *None of the Time*; 5 = *All of the Time*). The measure contained four subscales describing categories of social support: emotional/informational support (e.g., “Someone you can count on to listen to you when you need to talk about your loss”), tangible support (“Someone to prepare your meals if you felt unable to do so”), affectionate support (e.g., “Someone who shows you love and affection”), and positive social interactions (“Someone to do something enjoyable with”). High scores on the four social support subscales indicated considerable levels of perceived social support in each domain.

The original measure was created for participants with chronic illness, so the measure directions (“People sometimes look to others for companionship, assistance, or other types of support. How often is each of the following kinds of support available to you if you need it?”) were changed to “People sometimes look to others for companionship, assistance, or other types of support after someone has died. How often has each of the following kinds of support been available to you since the death of your significant person?” and “About how many close friends and close relatives do you have (people you feel at ease with and can talk to about what is on your mind)?” was changed to “About how many close friends and close relatives

do you have (people you feel at ease with and can talk to about what is on your mind related to your loss)?”). The tangible support subscale items were changed to be less specific to chronic illness and more reflective of loss experience (e.g., “Someone to help with daily chores if you were sick” was changed to “Someone to help with daily chores if you felt unable to do them”). The emotional/informational support subscale items were changed to reflect emotional/informational support related to loss (e.g., “Someone to turn to for suggestions about how to deal with a personal problem” was changed to “Someone to turn to for suggestions about how to deal with your loss”). One item in the positive social interactions subscale was changed because it also reflects emotional/informational support (“Someone to do things with to help you get your mind off things” was changed to “Someone to do things with to help you get your mind off of your loss”).

In a study of 2987 chronically ill patients, internal reliability estimates were adequate, yielding Cronbach alphas of .96, .92, .94 and .91 for the subscales, respectively (Sherbourne & Stewart; 1991). The reliability of the measure was supported in a sample of 376 women grieving the loss of a pregnancy or the death of a newborn ($\alpha = .96$; Law, 2014). In this study, the reliability estimate for the full measure was .96. The estimates for the individual subscales were .94 for emotional support, .89 for tangible support, .88 for affectionate support, and .91 for positive social interactions. Support for discriminant and convergent validity was found in the sample of 2987 chronically ill patients as the scores on the social support measure were correlated with scores on related constructs such as loneliness, family functioning, and mental health, but showed empirical distinction (Sherbourne & Stewart; 1991). Subscales scores were correlated with each other, but correlations between subscale scores were less than the square root of the product of their reliabilities, indicating unique variance for each subscale.

Prolonged grief. The PG-13 is a 13-item measure assessing symptoms of prolonged grief disorder (Prigerson et al., 2009; Prigerson et al., 2021). Of the 13 items, scores on 10 of the items can be summed to represent a continuous scale of prolonged grief symptoms. The first two items (“have you lost someone significant to you?” and “how many months has it been since your significant other died?”) were not included in this survey because they both would already be addressed through the demographic form. Ten items asked participants to indicate how they currently feel on a 5-point Likert scale (1 = *Not at all* to 5 = *Overwhelmingly*) with regard to symptoms of prolonged grief disorder (e.g., “Do you feel that life is meaningless without the person who died?”, “Do you avoid reminders that the person who died is really gone?”). The additional three items on the scale were used to determine if respondents meet the diagnostic criteria for prolonged grief disorder (“Have you lost someone significant to you? Yes/No”, “How many months has it been since your significant other died?”, “Have the symptoms above caused significant impairment in social, occupational, or other important areas of functioning? Yes/No”). The 10-item scale was summed to create a measure of prolonged grief symptoms, with high scores indicating numerous prolonged grief symptoms.

Support for the measure’s reliability was found in three samples of bereaved people ($\alpha = 0.83, 0.93, \text{ and } 0.93$; Prigerson et al., 2021). The reliability estimate for this study was .89. This measure was created to operationalize psychometrically valid diagnostic criteria and an algorithm for diagnosing prolonged grief disorder. In a sample of 291 bereaved adults, the diagnostic criteria identified participants who were at a heightened risk for distress and dysfunction. Participants who met the criteria for prolonged grief disorder were more likely to experience comorbidity of other major disorders (major depressive disorder, posttraumatic stress disorder, or generalized anxiety disorder), suicidal ideation, functional disability, and poor

quality of life in the second year after loss. Additionally, support for discriminant validity was found for the measure with regard to associations with scores on measures with other mood and anxiety disorders (including major depressive disorder; posttraumatic stress disorder; and generalized anxiety disorder; Prigerson et al., 2021).

Posttraumatic growth. The Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996) is a 21-item scale of positive changes that may occur as a result of a crisis event. The scale contains five subscales, including Factor I: Relating to Others (e.g., “I more clearly see that I can count on people in times of trouble”), Factor II: New Possibilities (e.g., “I established a new path for my life”), Factor III: Personal Strength (e.g., “I have a greater feeling of self-reliance”), Factor IV: Spiritual Change (e.g., “I have a better understanding of spiritual matters”), and Factor V: Appreciation of Life (e.g., “I changed my priorities about what is important in life”).

The original scale asked participants to indicate the degree to which each change occurred in their life “as a result of the crisis/disaster.” The directions were changed to “as a result of the death” to be relevant to bereaved participants. Thus, the revised measure asked participants to rate the degree to which this change occurred as a result of their loss on a 6-point Likert scale (0 = *I did not experience this change as a result of the death*; 5 = *I experienced this change to a very great degree as a result of the death*). The scale labels were changed from ending with “as a result of my crisis” to “as a result of the death.” The scale was scored by summing item responses; high scores indicated high levels of posttraumatic growth following a loss.

In a sample of 604 undergraduate students who experienced a negative life event within the last five years, discriminant validity was supported as scores on a measure of posttraumatic growth were not related to scores on a social desirability measure, and were weakly correlated

with scores on measures of extraversion, openness, agreeableness, and conscientiousness. Support for construct validity was demonstrated as college students who had experienced a traumatic event in the past year reported more growth than students who did not experience a traumatic event (Tedeschi & Calhoun, 1996). Additionally, an adequate internal consistency estimate was found ($\alpha = .90$; Tedeschi & Calhoun, 1996). Support for reliability also was found in a study of 148 women grieving the death of a close female friend ($\alpha = .96$; Sauber & O'Brien, 2020). The reliability estimate for this study was .93.

Results

All analyses were conducted using SPSS 27. The means, standard deviations, ranges, reliabilities, and correlations among the variables were calculated and can be found in Table 2.

Participants, on average, experienced low-to-moderate levels of disenfranchised grief. Regarding social support, participants reported having moderate levels of each type of social support. Participants reported the highest mean scores for affectionate support, followed by positive social interactions, then emotional support and finally tangible support. Participants reported utilizing the three coping styles, problem-focused coping, active emotional coping, and avoidant emotional coping at moderate levels on average. The average item scores for each scale revealed that participants reported the highest mean scores for problem-focused coping, then active emotional coping, then avoidant emotional coping.

Participants reported moderate levels of prolonged grief symptoms. It should be noted that the diagnostic criteria for prolonged grief disorder required a cutoff score of 30 for impairment to be present. Using Prigerson and colleagues' proposed diagnostic criteria (2009), 64 participants, 40.25% of the sample, met the cutoff for Prolonged Grief Disorder. Participants reported moderate levels of posttraumatic growth.

Correlations

Bivariate correlations were computed for all constructs of interest using Pearson's r (see Table 2). Prolonged grief had a moderate, positive correlation with disenfranchised grief. There were moderate, negative correlations between prolonged grief and all social support subscales: emotional support, tangible support, affectionate support and positive social interactions. A strong, positive correlation was found with prolonged grief and avoidant emotional coping, while a small-to-moderate, negative correlation was found with active emotional coping.

Posttraumatic growth was correlated with most variables in the reverse direction from prolonged grief. A small, negative correlation was found between posttraumatic growth and disenfranchised grief. Small, positive correlations were found among posttraumatic growth and emotional support, affectionate support, and positive social interactions. Problem-focused coping and active emotional coping were strongly and positively correlated with posttraumatic growth.

There was no correlation between prolonged grief and posttraumatic growth.

Regression Analyses

Two multiple linear regression analyses were conducted to predict scores on measures of prolonged grief and posttraumatic growth. The predictors in both analyses were scores on measures of disenfranchised grief, the social support subscales (emotional/informational, tangible, affectionate, and positive social interactions), and the coping style subscales (problem-focused, avoidant emotional, active emotional). Disenfranchised grief was entered in the first step; the social support subscales were entered in the second step; the coping style subscales were entered in the third step. This order is consistent with the model of resilience (Mancini & Bonanno, 2009), which posits exogenous resources (disenfranchisement) as preceding social

support, which then is followed by coping strategies. An alpha level of .05 was used to test for significance.

Six assumptions were met for the regression analyses for both outcome variables. The first, linear relationships between variables of interest, was supported by examining scatterplots of all variables. The second, no multicollinearity, was met as VIF scores were below 4 and tolerance scores were above 0.25. The third, independence, was supported by Durbin Watson scores of 1.74 for the prolonged grief regression and 1.81 for the posttraumatic growth regression. The fourth, homoscedasticity, was met as there was a lack of funneling on the residual plots, demonstrating equal variance along each level of the outcome variables. The fifth, a normal distribution of residuals, was supported by the P-P plots. Finally, the sixth assumption of no biasing in the model was met as Cook's distance values were less than 1.

When predicting prolonged grief, the predictors collectively accounted for 43% of the variance, with disenfranchised grief accounting for 8.1%, social support accounting for 7.0%, and coping accounting for 27.9%. When all variables were included in the regression, active emotional coping and avoidant emotional coping uniquely accounted for variance, with active emotional coping relating negatively and avoidant emotional coping relating positively to prolonged grief.

Regarding posttraumatic growth, the predictors collectively accounted for 36.6% of variance, with disenfranchised grief accounting for 4.5%, social support accounting for 1.8%, and coping accounting for 30.3%. The second step, social support, was not significant. When all variables were included in the regression, problem-focused coping and active emotional coping uniquely accounted for variance, with both relating positively to the outcome.

Post-hoc analyses were conducted to provide additional understanding of how the predictors may differentially contribute to grief outcomes for people with distinct grief experiences. Regression analyses with the same predictors and outcomes were conducted with three subsets of the full sample: participants who met the diagnostic criteria for prolonged grief disorder (40.25%, N = 64), participants who had the top third of scores for posttraumatic growth (N = 53), and participants who had the top third of scores for disenfranchised grief (N = 53).

For participants who met the criteria for prolonged grief disorder, disenfranchised grief and social support were not predictive of prolonged grief and posttraumatic growth, however coping accounted for 22.2% of variance in prolonged grief and 41.9% of variance in posttraumatic growth. Only avoidant emotional coping explained unique variance in prolonged grief and only problem-focused coping explained unique variance in posttraumatic growth.

Similar results were found with participants with the highest levels of posttraumatic growth; disenfranchised grief and social support were not significant but coping predicted 23.7% of variance in prolonged grief and 32.1% of variance in posttraumatic growth. Again, only avoidant emotional coping explained unique variance in prolonged grief. Active emotional and problem-focused coping predicted variance in posttraumatic growth, similar to the full sample.

Finally, participants with the highest levels of disenfranchisement showed similar findings with only coping accounting for variance, 29% in prolonged grief and 27.5% in posttraumatic growth. For this subsample, avoidant emotional coping and problem-focused coping uniquely predicted variance for prolonged grief, compared to avoidant emotional and active emotional coping in the full sample. Active emotional and problem-focused coping alone uniquely predicted variance in posttraumatic growth, the same findings as the full sample.

Discussion

The results from this study advance understanding of factors associated with prolonged grief and posttraumatic growth in people bereaved by an opioid-related loss. Many hypotheses were supported, with disenfranchised grief, social support, and coping style collectively accounting for variance in prolonged grief and posttraumatic growth. Coping style appeared to be the main driver of variance, accounting for over two thirds of the total variance accounted for by the model in both regressions. These findings have important implications for future research and clinical applications for populations bereaved by a stigmatized loss.

The results should be discussed in consideration of the sample, which was primarily White, women-identified, and bereaved by the loss of a family member. The latter may partially explain the high levels of prolonged grief experienced by this sample, since the untimely loss of one's child is seen as particularly traumatic. Gender may also relate closely to the coping-related findings, since women are typically thought to utilize emotion-focused coping whereas men may more often use problem-focused coping (Endler & Parker, 1990; Kelly et al., 2008).

Additionally, gender may be a moderator of the relationship between coping strategies and grief outcomes (Kristic Joksimovic, 2022). Finally, it is important to consider the racial makeup of the sample; these outcomes may not capture the disenfranchisement or stigma that Black, Latinx and Indigenous American communities face after an opioid-related loss.

Prolonged Grief

The transactional model of stress and coping (Folkman & Lazarus, 1988) and the model of resilience (Mancini & Bonanno, 2009) both posit coping as the variable that most directly influences grief outcomes. According to these frameworks, the circumstances surrounding a

death and the mourning process impact how one copes with the loss, which then plays a role in outcomes such as prolonged grief and posttraumatic growth.

Considering that active emotional and avoidance emotional coping were the most important variables in predicting prolonged grief, coping that addresses affective responses to a loss experience were uniquely related to prolonged grief symptoms for this sample. This may have occurred because many prolonged grief symptoms are affective, including feelings of longing, yearning, emotional pain, sorrow, numbness, and loneliness. The most positive outcomes appear to be associated with people who cope in a way that directly addresses and processes these difficult emotions (active emotional coping). Moreover, people who utilize coping methods that distract or disengage from difficult emotions (avoidant emotional engagement) may be less able to process the powerful feelings, and perhaps more likely to experience prolonged grief symptoms. Conversely, people who are already experience prolonged grief symptoms may be more likely to turn to avoidant emotional coping, either because they may experience a strong desire to disengage from the particularly taxing emotions associated with prolonged grief or because they experience additional barriers to other types of coping. This relationship is especially important for people with the highest levels of prolonged grief symptoms. In the subset of the sample that met the diagnostic criteria for prolonged grief disorder, only avoidant emotional coping predicted unique variance in prolonged grief. Additionally, existing individual differences may result in both a higher risk for prolonged grief disorder as well as a higher likelihood to engage in avoidant emotional coping. For example, previous mental health status, such as a history of depression, may predict both prolonged grief disorder and use of more “maladaptive” coping strategies. Socioeconomic stressors also may explain the link between prolonged grief and avoidant emotional coping.

Problem-focused coping did not explain unique variance for prolonged grief, perhaps because prolonged grief symptoms are primarily affective. There are a couple of symptoms that are problem-focused, such as the griever having problems re-engaging in life (e.g., engaging with friends, pursuing interests, planning for the future), but overall, prolonged grief disorder is marked by an intense, lasting emotional response to the loss. Thus, even if grievers are able to seek advice, plan to address their situation in some way, or engage with spiritual coping, as are all aspects of problem-focused coping, they may not be preventing or addressing the central emotional experiences of prolonged grief. Therefore, problem-focused coping may introduce solutions for facets of the grief experience, but it may not play a role in reducing the painful, negative emotions that are central to prolonged grief.

Another potential reason for the lack of association between problem-focused coping and prolonged grief may be that the prolonged grief symptoms may render problem-focused coping strategies ineffectual. For people with lower levels of prolonged grief symptoms, addressing the problems associated with the loss may feel like a viable way to cope with the effects of a death. However, people with higher levels of prolonged grief symptoms may feel yearning, longing, problems with re-engaging in life, and trouble completing daily tasks even if they are actively trying to address the death through problem-focused coping. Regardless, while problem-focused coping did not predict prolonged grief, it should still be considered an important variable in predicting posttraumatic growth, as discussed in the next section.

Contrary to our hypotheses, disenfranchised grief and all four types of social support did not account for unique variance in prolonged grief. The abundance of stigma surrounding a substance-related death would suggest that disenfranchisement would be a salient facet of this grief experience, and indeed, participants reported a moderate level of disenfranchised grief and

a moderate-to-high level of social support. Additionally, one might expect stigma to impact the quality and quantity of available social support as well as grief outcomes.

When considering these findings in context of the transactional model of stress and coping (Folkman & Lazarus, 1988) and the model of resilience (Mancini & Bonanno, 2009), there are several explanations for the aforementioned findings. It is possible that disenfranchisement may relate to one's appraisal of the loss, which then predicts coping. This explanation is supported by previous research; in a sample of women bereaved by a close female friend, disenfranchised grief was not related to prolonged grief, but was related to coping style, which then predicted prolonged grief (Sauber & O'Brien, 2020). Our post-hoc analyses supported this possibility; for participants experiencing the highest levels of prolonged grief, only coping explained unique variance. Another explanation may relate to our measure of disenfranchised grief, the WDG (St. Clair, 2013). This measure may not have included types of disenfranchisement specific to this sample, such as blaming or stigmatizing comments about substance-related deaths (Feigelman et al., 2011). These types of disenfranchisement may be more impactful in predicting prolonged grief than the types included in the WDG, such as not being recognized as having a right to grieve.

Regarding social support, available social support may matter less than whether the griever used that available social support and if it fit their needs. While the social support measure utilized in this study (MOSSSS; Sherbourne & Stewart, 1991) measured how often certain types of support were available to the griever, active emotional coping may better capture the role that the griever plays in accessing meaningful support and sharing emotions with loved ones (e.g., "I've been getting emotional support from others"). There may be other reasons for why social support was related to prolonged grief but did not predict unique variance; perhaps

social support was a response to prolonged grief. People with prolonged grief may find it difficult to access or connect with their social networks, thus prolonged grief may result in diminished social support. Similarly, there may be a third factor that influences both prolonged grief and social support. For example, perhaps people whose loved one had experienced a more severe substance use disorder prior to death had strained or distant relationships with their networks prior to the death. The challenging relationship may facilitate high prolonged grief and low social support after the death.

While assessing the prevalence of prolonged grief disorder in this population was not a central aim of the present study, determining such provides valuable insight as to the level of risk that people bereaved by an opioid-related death may face. The percentage of people with diagnosable prolonged grief disorder in the current sample, 40.25%, far exceeds prevalence estimates found in previous samples of grieving individuals, which ranged from 6.7% to 25.4% (Kersting et al., 2011; Newson et al., 2011). One study found a higher estimate (74%) of prolonged grief disorder in a sample of adults bereaved by opioid overdose, but that study used an outdated measure of prolonged grief disorder (Bottomley et al., 2021; Prigerson et al., 1995). Considering that close to half of people bereaved by an opioid-related loss may have critical levels of prolonged grief disorder symptoms, this population is indeed at considerable risk for negative grief outcomes.

Posttraumatic Growth

In many ways, the findings of the regression predicting posttraumatic growth were similar to the findings of the regression predicting prolonged grief. Coping was the main predictor of both outcomes, though the specific type of coping accounting for unique variance differed. However, as supported by prior research (Johnsen & Afgun, 2020; Bellet et al., 2018),

as well as the lack of relationship between prolonged grief and posttraumatic growth in the current study, these two constructs should not be conceptualized as two ends of a spectrum of grief outcomes. Instead, they should be viewed as discrete concepts, relating to the predictor variables in unique ways.

Additionally, it is noted that this sample, people bereaved from a loss six to 24 months ago, may have lower levels of posttraumatic growth compared to the full population of people bereaved by an opioid-related death. Participants may continue to process their loss in the years afterward, thus, the findings related to posttraumatic growth may not capture all the relationships that may emerge with predictor variables over time.

Problem-focused and active emotional coping uniquely predicted variance for posttraumatic growth. One possible explanation for this finding is the shared proactive nature of these coping styles and posttraumatic growth. For example, posttraumatic growth may include recognition of one's strength, a feeling of self-reliance, and the knowledge that one can handle life's difficulties. People who cope by directly addressing problems associated with the loss or seeking emotional expression may be likely to view these strategies as components of their active resilience or they may have an internal locus of control. However, the reverse may be true in that people who develop high levels of posttraumatic growth may feel confident in their ability to engage in proactive forms of coping. This explanation is less aligned with the transactional model of stress and coping (Folkman & Lazarus, 1988) and the model of resilience (Mancini & Bonanno, 2009). In these models, coping is seen as the way to address negative feelings associated with the loss, and posttraumatic growth is seen as an outcome of this negotiation process. The importance of these coping strategies is supported by their being the sole predictors

of posttraumatic growth for the total sample and for those with the highest levels of posttraumatic growth.

When examining the relationships between coping and posttraumatic growth, one may wonder if posttraumatic growth represents, in itself, a set of adaptive coping mechanisms that improve the subjective experience of the griever. Indeed, proposed theoretical models of posttraumatic growth differ in whether they consider posttraumatic growth to be a distinct outcome or a coping strategy related to meaning-making (Zoellner & Maercker, 2006). This question is considered to be an ontological debate, and relates to whether posttraumatic growth represents a form of identity transformation (Sumalla et al., 2009). While the correlations between posttraumatic growth and “adaptive” coping styles were strong in the present study, there was variance in posttraumatic growth that was not accounted for by coping. Additionally, items from the PTGI generally relate to the “outcome” view of posttraumatic growth, capturing a changed awareness about oneself and the world (e.g., “I have a better understanding of spiritual matters”). Thus, posttraumatic growth is conceptualized as being related to coping strategies, but representing the result of the struggle rather than the struggle itself (Tedeschi & Calhoun, 2004).

Consistent with past research, avoidant emotional coping did not predict variance in posttraumatic growth (Sauber & O’Brien, 2020). It may be that a relationship exists, but was not captured in the primarily women-identified sample. Alternatively, avoidant emotional coping may predict posttraumatic growth when it is used at a high level. In this study, participants endorsed low-to-moderate levels of avoidant emotional coping on average. Another explanation for the finding could be that some avoidant strategies may be maladaptive, which others may be adaptive. For example, self-distraction and behavioral disengagement may help the griever manage distressing emotions and reengage with their daily life tasks. This is supported by the

dual process model of grief, which posits that grievers must oscillate between loss-oriented tasks and restoration-oriented tasks, which include avoidance and distraction from grief (Stroebe & Schut, 1999). Of course, it is possible that avoidant emotional coping simply does not relate to posttraumatic growth, and is more important when predicting problematic grief outcomes.

There is also the question of why disenfranchised grief and social support appear to play very little role in predicting posttraumatic growth. The limited available research between these variables on other populations, including certified nursing assistants and women bereaved by a close female friend, demonstrated a negative relationship between disenfranchised grief and posttraumatic growth (Anderson & Gaugler, 2006; Sauber & O'Brien, 2020). While our study also demonstrated this negative relationship, it was a weak correlation and disenfranchised grief did not account for unique variance in predicting posttraumatic growth. The explanation for this may be that the measure used in this study (WDG; St. Clair, 2013) did not capture the adverse grief experiences, such as blame and stigmatization of substance-use, that is more specific to the experience of people bereaved by an opioid-related death.

Social support also may not have explained unique variance in posttraumatic growth due to our measurement of support available compared to support sought and received. If grievers perceived social support to be widely available, they may develop posttraumatic growth only if they utilized that support in ways that were helpful and non-stigmatizing for them. Indeed, a study of women mourning a close female friend reported that all of the grievers categorized some responses to their loss as unhelpful (Sauber & O'Brien, 2020). Prior research provides context for these findings, demonstrating mixed associations between social support and posttraumatic growth, with only some types of social support predicting growth after a loss (Michael & Cooper, 2013). Satisfaction with social support was linked to positive outcomes

(Linley & Joseph, 2004), thus, the degree to which participants sought and benefitted from available sources of support may be more important to predicting posttraumatic growth.

Limitations

While this study had many strengths, namely its innovation in examining grief in a highly stigmatized population, it is not without limitations and the findings should be considered in context. One limitation is the demographic homogeneity of the sample, specifically relating to gender and race. A majority of the participants were White and woman-identified, despite the sample being diverse regarding income and educational attainment. This may be a result of the recruitment methods of this study, which primarily relied on community organizations and support groups. A meta-analysis of the efficacy of bereavement groups indicated that participants in such groups are primarily female (74%) and White (72%; Maass et al., 2022). People of color may feel discouraged both from seeking formal support from community organizations and from participating in scholarly research due to the racialized stigmatization of opioid use deaths in Black and Latinx communities (Netherland & Hansen, 2016). Indigenous American communities also are disproportionately impacted by the opioid epidemic and may face unique disenfranchisement (Qeadan et al., 2022).

Furthermore, the recruitment methods created an additional limitation in that a majority of the participants had sought formal support. Almost two-thirds of the participants reported having received formal counseling (61.0%) and 44.7% reported attending community support groups. Only 11.9% of the sample reported using no formal resources. This likely relates to the sample being predominantly composed of women, who are more likely to seek formal support (Wendt & Schafer, 2016). This limits the generalizability of the results since people who have not sought support may experience different grief outcomes. Our sample may not include those

who feel most disconnected from community resources, most stigmatized, or have the least support in their grief. Future research would benefit from recruitment methods that can better identify people who have not sought formal support, yielding a more diverse and representative sample. This may include recruiting specifically in predominantly Black communities, and extending recruitment beyond organizations focused on grief or substance use. Instead, using snowballing as a recruitment strategy or conducting in-person recruitment in barbershops and hair salons may yield higher representation from Black communities (Otaldo et al., 2015; Palmer et al., 2021). Latinx populations may be best recruited through flyer and radio disseminations, word-of-mouth methods, and partnership with Latinx community organizations (Mansfield et al., 2022).

Additionally, these findings should be considered with in light of potentially confounding or moderating variables. For example, the participants may have experienced difficult and complex relationships with their loved ones prior to the opioid-related death. The impact of closeness at time of death, history of conflict, and awareness of the substance use disorder (if present) may be important variables in predicting grief outcomes for this population. This data collection occurred at an unprecedented moment in time; opioid deaths rose drastically during the COVID-19 pandemic. People grieving these losses may have experienced few available social networks and diminished social support. Thus, this study may not represent the typical role of social support after this type of death.

Finally, this study is limited in that our findings only extend to those who have experienced an opioid-related loss between six and 24 months ago. While this represents an important methodological choice for several reasons, it also omits people who may have been grieving this type of loss for many years. People who have had longer to process their traumatic

loss may be more likely to experience posttraumatic growth. Additionally, it would be impactful to understand how both prolonged grief and posttraumatic growth function across a longer period of time for this population. Thus, future research may benefit from a broader sample and a longitudinal design that may better capture temporal grief reactions.

Future Research Directions

While disenfranchised grief, social support, and coping collectively accounted for a substantial portion of the variance in grief outcomes, future research should examine other factors that may contribute to prolonged grief and posttraumatic growth following this type of loss. Communities affected by an opioid-related death may have experienced anticipatory grief and repeated non-death losses long before the death itself as they witnessed their loved one struggle with an opioid use disorder. This prolonged trauma may have an impact on the grief experience after the death and warrants future attention. Additionally, the model of resilience (Mancini & Bonanno, 2009) proposed that individual differences, such as attachment style, may play a role in grieving. A study of women bereaved due to the death of a close female friend found that attachment anxiety and attachment avoidance predicted perceived social support and coping strategies (Sauber & O'Brien, 2020). Similarly, the roles of meaning-making and continuing bonds following a loss have yet to be studied in this population. Thus, it may be important for future research to examine how these individual differences account for grief outcomes in this population.

Additionally, future research should examine how these variables operate to predict outcomes for members of the Black and Latinx communities impacted by an opioid-related death. Given the majority White sample, the current study may not capture the unique experience of these communities, especially considering the racialized stigma surrounding this type of loss

for racial and ethnic minorities. Excessive and racist criminalization of people impacted by the opioid epidemic in Black and Latinx communities may lead to high levels of disenfranchisement (Netherland & Hansen, 2016). Thus, future studies should aim to understand how disenfranchisement, social support, and coping style contribute to grief outcomes for communities of color who are profoundly impacted by opioid-related losses.

Finally, future research should develop and investigate ways in which psychologists can effectively assist people bereaved by this type of loss to use effective coping strategies, specifically active emotional coping and problem-focused coping. Interactive online interventions may be a viable way to disseminate information about coping strategies to people bereaved by this type of loss, especially those who do not seek formal support. Studies should assess the efficacy of such interventions both in improving active emotional and problem-focused coping as well as decreasing risk for prolonged growth and increasing likelihood of posttraumatic growth.

Clinical Implications

This study has important implications for how psychologists and community advocates can intervene to reduce negative outcomes and optimize positive outcomes for populations grieving deaths related to opioid use. Special attention should be directed to the role of active emotional coping, which was the only predictor that accounted for variance in both grief outcomes. Active emotional coping may be central in interventions that not only aim to minimize prolonged grief responses, but maximize growth after a traumatic loss.

Psychologists may help clients to develop coping strategies such as such as positive reframing, utilizing emotional support, expressing negative emotions, and accepting the difficult reality of the loss. Additionally, community organizations can help to remove barriers to these

strategies by providing spaces where people are encouraged to express their emotions after a loss as well as educate them about active emotional and problem focused-coping. As mentioned above, online interventions may be a highly accessible form of information about these coping strategies.

It may be important as well to help grievers find alternative coping strategies to avoidant emotional coping, as it was predictive of prolonged grief. Specifically, this population may be at risk for turning to two forms of avoidant emotional coping, i.e., substance-related coping and self-blame, since people grieving a substance-related loss have received blaming comments from their community (Feigelman et al., 2011). Thus, practitioners should be active in identifying the use of avoidant emotional coping and addressing substance use and feelings of blame or guilt that may arise after this type of loss. Psychoeducation regarding the nature of substance use disorder and substance-related deaths may help reduce self-blame as a coping strategy.

Additionally, problem-focused coping appears to be related to posttraumatic growth, thus psychologists might help bereaved people utilize these coping strategies in time, when they indicate that they may be open to growth from their traumatic loss. One way that people may feel they can address the “problem” may be through activism for populations affected by substance use. Anecdotally, many of the community leaders that aided in recruitment for this study had been impacted by one or more substance-related losses themselves and channeled their grief experiences into meaningful and impactful community interventions. Some participants also shared via open-ended responses that engaging in advocacy to honor their loved ones has been a helpful experience for them. Existing qualitative research provided support for advocacy and education as cathartic and purposeful coping strategies after a substance-related loss (Valentine & Walter, 2015). Thus, helping those bereaved by opioid-related deaths use problem-focused

coping to address their grief experiences and the opioid epidemic more broadly may be a viable means to create change at multiple levels of intervention.

Conclusion

This study aimed to understand how disenfranchised grief, social support, and coping style contributed to positive and negative grief outcomes after an opioid-related death. Those grieving opioid-related deaths have received little empirical attention despite the staggering and growing number of deaths caused by the opioid epidemic. Active emotional and avoidant emotional coping accounted for variance in prolonged grief and active emotional and problem-focused coping explained variance in posttraumatic growth. Future research is needed to develop and test the efficacy of interventions that help grievers integrate active emotional and problem-focused coping into their loss reactions. Psychologists may be able to optimize resilience and growth in this population by helping people who are bereaved by this stigmatized loss use active emotional and problem-focused means of coping, such as spaces to express and process emotions after a loss as well as avenues to community activism. It is our hope that this study gives voice to the grief experiences of individuals bereaved by opioid-related deaths, and provides future research and practice interventions to assist this understudied and underserved population.

Table 1

Demographics (n = 159)

Variable	Total %*	n
Gender		
Woman	84.9	135
Man	11.9	19
Non-binary	1.9	3
Prefer not to disclose	1.3	2
Relationship to deceased		
Friend	16.4	26
Romantic Partner	8.8	14
Family member	74.8	119
Child	35.2	56
Parent	4.4	7
Sibling	17.0	27
Stepparent	.6	1
Stepsibling	.6	1
Aunt or uncle	4.4	7
Grandparent	3.1	5
Cousin	6.3	10
Other	3.1	5
Cohabiting at time of death?		
Yes	19.5	31
No	79.9	127
Cause of death		
Opioid overdose	83.6	133
Health complications related to opioid use	7.6	12
Other related cause	8.2	13
Expectancy of death		
Expected	8.2	13
Unexpected	81.1	129
Other	10.1	16
Intentionality of death		
Intentional	5.7	9
Accidental	79.9	127
Homicide**	7.5	12
Other	6.3	10
Race/Ethnicity***		
Black, Afro-Caribbean, African-American	5.7	9
Latino, Hispanic-American	5.7	9
White, European-American	88.1	140
Asian, Asian-American, Pacific Islander	1.9	3
Native American/Indigenous Peoples	1.3	2
Biracial/multiracial _____	.6	1

Educational attainment		
Did not complete high school	.6	1
High school/GED	15.7	25
Some college	37.7	60
Associate degree	11.3	18
Bachelor's degree	20.8	33
Master's degree	10.1	16
Doctorate, professional degree	3.1	5
Household income		
Below \$20,000	9.4	15
\$20,000 - \$39,999	17.0	27
\$40,000 - \$59,999	13.8	22
\$60,000 - \$79,999	13.8	22
\$80,000 - \$99,999	9.4	15
\$100,000 - \$119,999	9.4	15
\$120,000 - \$139,999	7.5	12
\$140,000 or more	18.2	29
Sexual orientation		
Straight	89.3	142
Bisexual	6.9	11
Lesbian, gay	1.9	3
Did not disclose	1.3	2
Relationship status		
Single	25.2	40
Together, never married	19.6	31
Married	41.5	66
Separated	.6	1
Divorced	7.5	12
Widowed	5.0	8
Have child(ren)?		
No	44.7	71
Yes	54.7	87
Struggling with substance use?		
Not at all	71.1	113
To a degree higher than "not at all"	27.7	44
Reported recruitment method****		
Listserv	.6	1
Directly from someone they know	17.0	27
Support group	40.3	64
Social media	11.9	19
University of Maryland SONA	18.9	30
Other	10.1	16

*Percentages may not add to 100 due to missing data.

**Homicides may include overdose or other deaths that are related to fentanyl lacing.

***This question was formatted so that participants could select multiple choices, thus the total exceeds the sample size.

****These counts may be problematic because methods may overlap. For example, a support group or organization may have recruited members via their social media pages. The “Other” category may include recruitment at events, which were organized primarily by support groups and community organizations.

Table 2

Means, Standard Deviations, Ranges, Reliability Estimates, and Correlations Among All Variables ($n = 159$)** correlation is significant at $p < .01$ * correlation is significant at $p < .05$

Variable	1	2	3	4	5	6	7	8	9	10
Predictors										
1. Disenfranchised Grief	1									
2. Emotional Support	-.59**	1								
3. Tangible Support	-.48**	.67**	1							
4. Affectionate Support	-.42**	.66**	.69**	1						
5. Positive Social Interactions	-.45**	.70**	.71**	.75**	1					
6. Avoidant Emotional Coping	.20*	-.23**	-.11	-.11	-.09	1				
7. Problem-focused Coping	-.26**	.32**	.17*	.24**	.17*	-.09	1			
8. Active Emotional Coping	-.39**	.39**	.30**	.35**	.35**	.00	.58**	1		
Grief Outcomes										
9. Prolonged Grief	.28**	-.37**	-.27**	-.29**	-.33**	.57**	-.08	-.22**	1	
10. Posttraumatic Growth	-.21**	.21**	.14	.19*	.16*	-.03	.56**	.51**	-.15	1
Mean	54.26	3.35	3.05	3.84	3.82	21.60	19.62	23.24	31.24	52.89
SD	14.74	1.01	1.23	1.01	.96	5.63	5.49	5.01	8.96	22.12
Actual Range	22-105	1-5	1-5	1-5	1-5	10-36	8-32	10-37	10-50	0-100
Possible Range	22-110	1-5	1-5	1-5	1-5	10-40	8-32	10-40	10-50	0-100
Cronbach Alpha	.92	.94	.89	.88	.91	.77	.84	.72	.89	.93

Table 3

Hierarchical Regression Analysis Predicting Prolonged Grief (n=159)

Variable	<i>B</i>	<i>SE B</i>	β	<i>T</i>	<i>df</i>	<i>R</i>	<i>R</i> ²	ΔR^2	<i>F</i>	ΔF
Step 1:					1	.28	.08	.08	13.83*	13.83*
Disenfranchised Grief	.17	.05	.28	3.72*						
Step 2:					4	.39	.15	.07	5.43*	3.14*
Disenfranchised Grief	.06	.06	.10	1.08						
Emotional Support	-1.96	1.08	-.22	-1.82						
Tangible Support	.26	.86	.04	.30						
Affectionate Support	-.25	1.07	-.03	-.23						
Positive Social Interactions	-1.22	1.20	-.13	-1.02						
Step 3:					3	.66	.43	.28	14.15*	24.52*
Disenfranchised Grief	.01	.05	.01	.11						
Emotional Support	-.76	.93	-.09	-.82						
Tangible Support	.02	.72	.00	.03						
Affectionate Support	-.19	.89	-.02	-.21						
Positive Social Interactions	-1.39	1.01	-.15	-1.38						
Avoidant Emotional Coping	.87	.10	.55	8.44*						
Problem-focused Coping	.24	.13	.15	1.85						
Active Emotional Coping	-.37	.15	-.21	-2.50*						

Note: * $p < .05$

Table 4

Hierarchical Regression Analysis Predicting Posttraumatic Growth (n=159)

Variable	<i>B</i>	<i>SE B</i>	β	<i>T</i>	<i>df</i>	<i>R</i>	<i>R</i> ²	ΔR^2	<i>F</i>	ΔF
Step 1:					1	.21	.05	.05	7.45*	7.45*
Disenfranchised Grief	-.32	.12	-.21	-2.73*						
Step 2:					4	.25	.06	.02	2.07	.74
Disenfranchised Grief	-.21	.15	-.14	-1.46						
Emotional Support	2.29	2.79	.11	.82						
Tangible Support	-1.46	2.23	-.08	-.65						
Affectionate Support	2.88	2.77	.13	1.04						
Positive Social Interactions	-.44	3.12	-.02	-.14						
Step 3:					3	.61	.37	.30	10.83*	23.86*
Disenfranchised Grief	-.04	.13	-.03	-.33						
Emotional Support	-1.48	2.41	-.07	-.62						
Tangible Support	-.26	1.86	-.01	-.14						
Affectionate Support	.54	2.32	.03	.23						
Positive Social Interactions	.50	2.64	.02	.19						
Avoidant Emotional Coping	.01	.27	.00	.03						
Problem-focused Coping	1.62	.33	.40	4.87*						
Active Emotional Coping	1.25	.38	.28	3.26*						

Note: * $p < .05$

Figure 1. Hypothesized Multiple Linear Regression Predicting Prolonged Grief

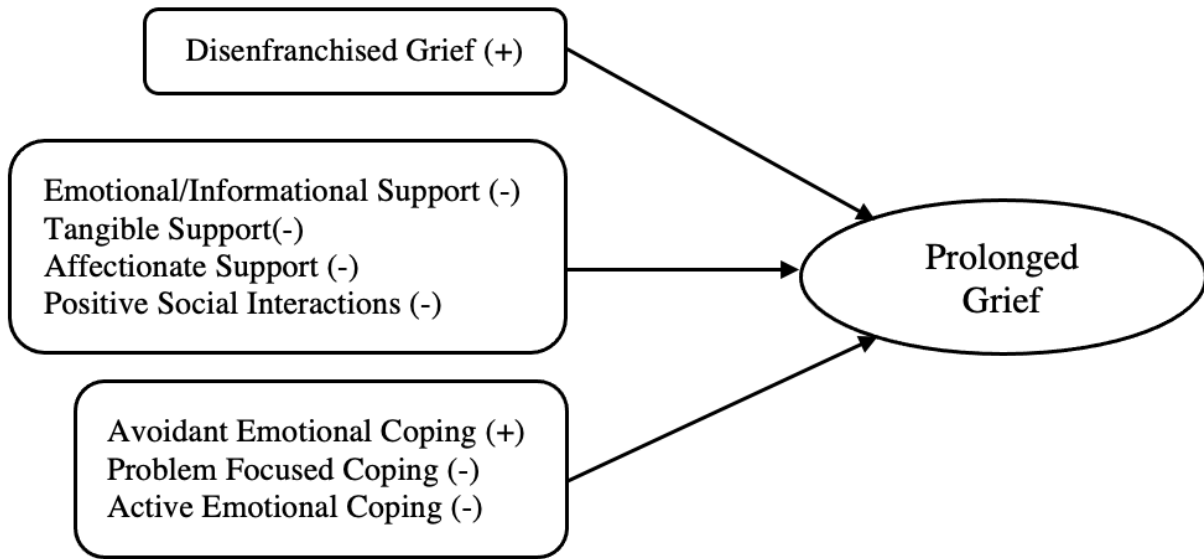


Figure 2. Hypothesized Multiple Linear Regression Predicting Posttraumatic Growth

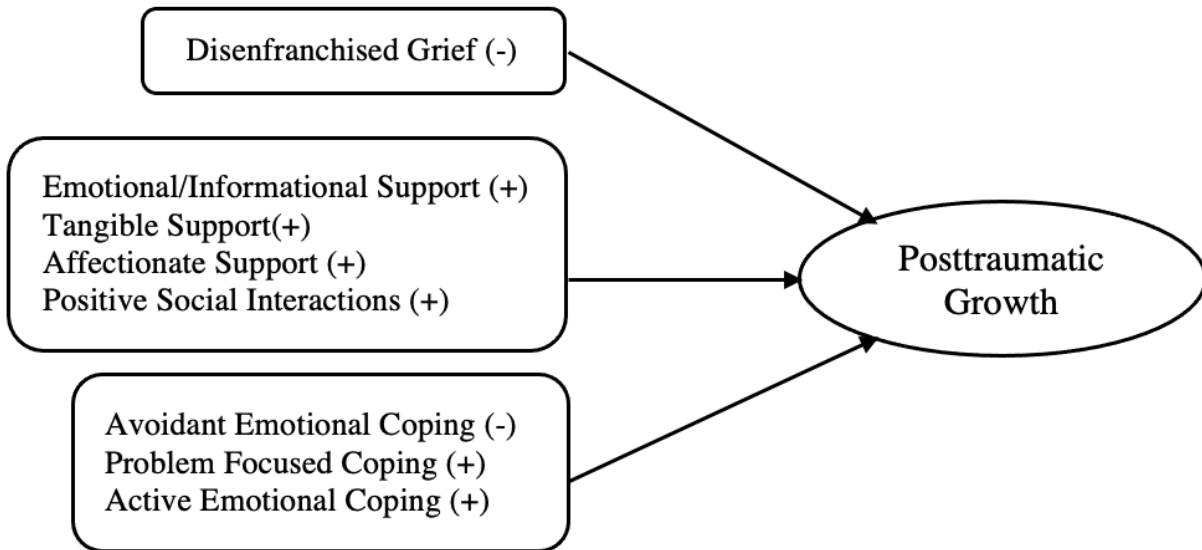


Figure 3. The Model of Resilience (Mancini & Bonanno, 2009)

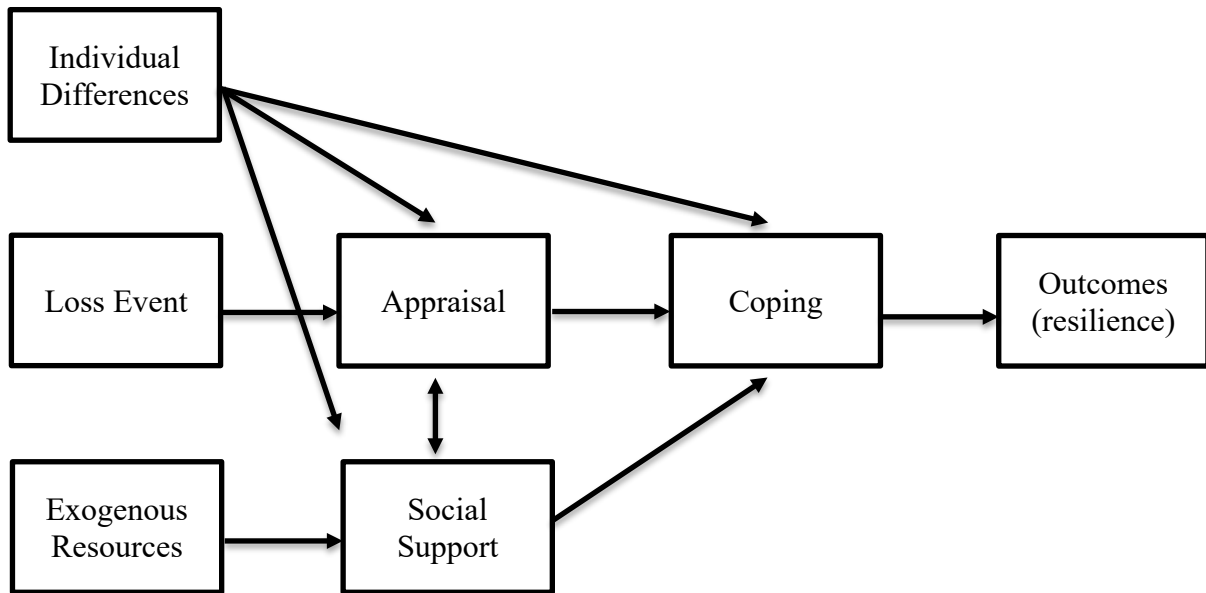


Figure 4. The Transactional Model of Stress and Coping (Folkman & Lazarus, 1988)

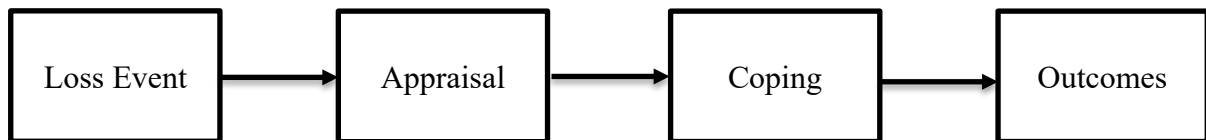
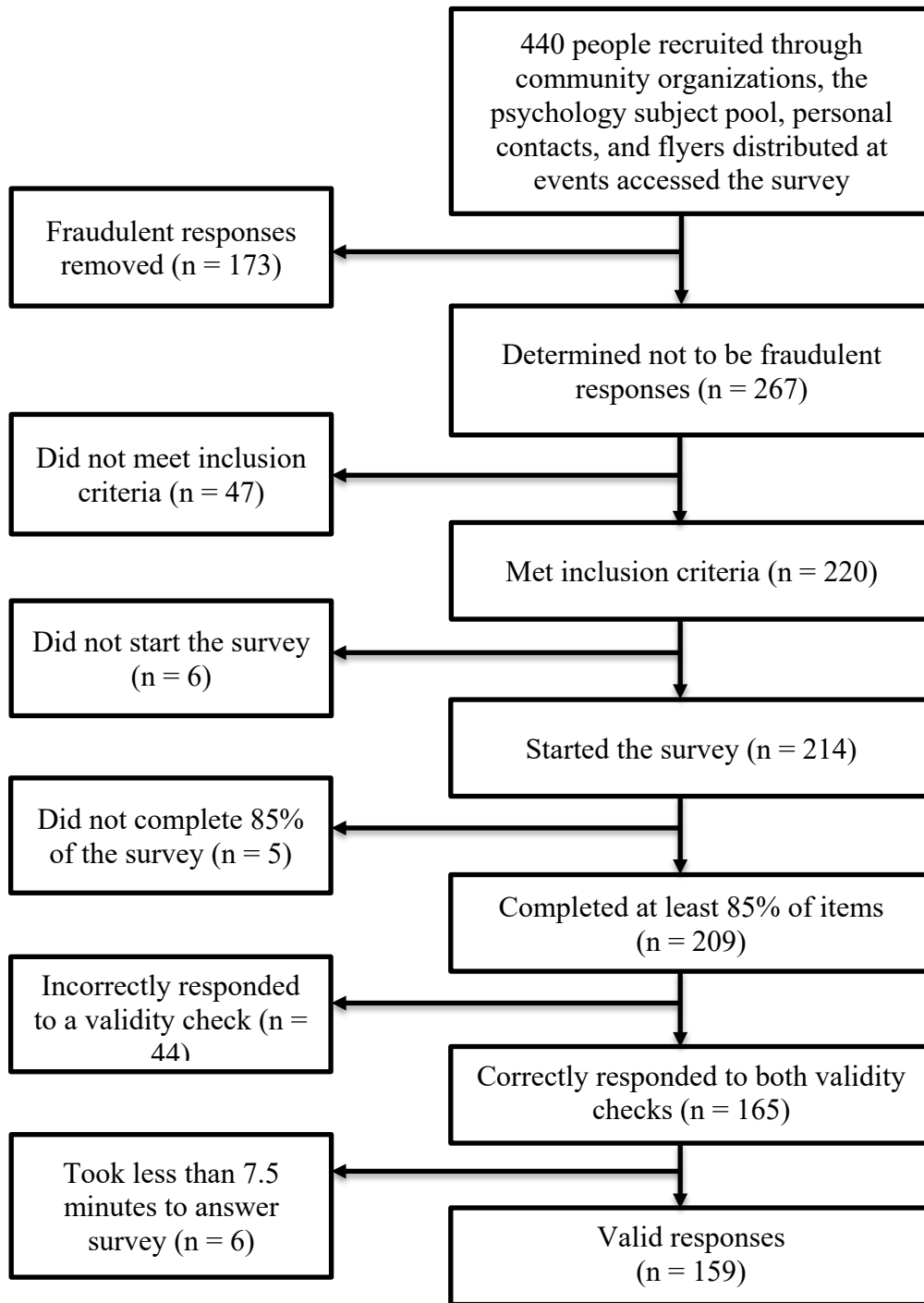


Figure 5. Distribution of participants.



Appendices

Appendix A

Literature Review

This literature review is divided into four subsections. The first section addresses the opioid epidemic in the United States, the cultural stigma that surrounds it, and the existing literature on people bereaved by a substance-related death. The second section discusses the theoretical framework for the presented study, comprised of the transactional model of stress, appraisal and coping and the model of resilience. The third section reviews the literature related to the predictor variables, including disenfranchised grief, social support, and coping. The fourth section concludes with a review on the outcome variables – prolonged grief and posttraumatic growth, as well as the detailed hypotheses of the presented study.

The Opioid Epidemic

An opioid is a drug that interacts with the opioid receptors in nerve cells in the body and the brain. Opioids are either created from the opium poppy plant directly or made synthetically in a lab. This drug class includes prescription painkillers (e.g., hydrocodone, i.e. “Vicodin[®]”, oxycodone, i.e. “OxyContin[®]”, and codeine), heroin and synthetic opioids such as fentanyl. Fentanyl is similar to morphine but is up to 100 times more potent and has become a main driver of drug overdose deaths (Higashikawa & Suzuki, 2008; Volpe et al., 2011). Opioids may be prescribed to treat chronic pain, such as after surgery (Nelson & Schwaner, 2009), during active cancer, and during palliative and end-of-life care (Dowell et al., 2016). When closely-monitored, prescription opioid use may be a legitimate approach to treating pain, but the euphoric sensations produced by opioids make opioid use common, leading to a national opioid epidemic of addiction and overdoses linked to prescription and non-prescription opioid use. Additionally, the

rising mortality of opioid use may be due to suppliers using fentanyl in the production of heroin or counterfeit oxycodone to minimize production costs, leading to the distribution of stronger, more deadly substances (Frank & Pollack, 2017).

Opioid agonists, such as methadone and buprenorphine, are in the same family as opioids but are used in treatment of opioid use disorders to transition the patient from the original opioid to an opioid agonist, which blocks the opioid receptors in the brain. Use of the opioid agonist then would be tapered off gradually under medical supervision.

Prevalence of Opioid Use and Opioid-Related Deaths

Non-medical opioid use is an epidemic that has resulted in the deaths of a staggering number of Americans since the 1990s (CDC, 2020). Approximately 450,000 people have died from an opioid overdose from 1999 to 2018 (CDC, 2020). Opioid overdoses have risen from 21,088 in 2010 to 46,802 in 2018 (CDC, 2020). In 2017, the U.S. Department of Health and Human Services declared a Public Health Emergency to address the opioid crisis in America (U.S. Department of Health and Human Services, 2019). North America is experiencing a “triple wave” of opioid overdoses due to increased use of prescription opioids, heroin, and synthetic opioids other than methadone (Ciccarone, 2019). An increase in prescriptions for opioid analgesics caused an increase in opioid-related overdoses beginning in the 1990s (CDC). A steep increase in heroin overdose deaths began in 2010 (Rudd et al. 2014). Deaths from the synthetic opioids have been mainly driven by dramatic increase in use of fentanyl since 2013. In 2018, approximately two million Americans had an opioid use disorder (U.S. Department of Health and Human Services, 2020).

Non-prescribed opioid use had decreased slightly from 11.8 million in Americans 12 years old or older in 2016 to 10.1 million in 2019 (U.S. Department of Health and Human

Services, 2020), however preliminary data from 2020 indicated a drastic increase of opioid use, potentially related to the COVID-19 epidemic. The highest number of overdose deaths, 81,000, was reported in the 12-month period ending in May of 2020 (CDC, 2020). This increase was thought to be primarily driven by synthetic opioid use. Of the 38 U.S. jurisdictions with synthetic opioid data available, 37 reported an increase between the 12 months before June 2019 to the period from June 2019 to May 2020. Of these, 18 reported an increase over 50% and 10 states in the West reported staggering increases of over 98%.

Approximately 89.7% of people experiencing a substance use disorder do not receive treatment (U.S. Department of Health and Human Services, 2020).

Rural Use of Prescription Opioids

While the increase in opioid use is widespread, individuals located in rural areas have higher rates of drug poisoning deaths. Prescription opioid deaths also are higher in rural areas after adjusting for population density (Keyes et al., 2014; Paulozzi & Xi, 2008; Wunsch et al., 2009) This has been hypothesized to be related to four main factors: (a) greater presence of prescription opioids in rural areas, creating availability, (b) out-migration of young adults, (c) greater rural social and kinship networks which facilitate distribution, and (d) economic stressors that contribute to drug use overall (Keyes et al., 2014).

Prescription of opioids increased in the mid-1990s, partially in response to a movement in the medical community to address chronic pain more aggressively, and this increase was highest in states with large rural populations, Florida being an outlier. These populations have, on average, more older residents than urban areas, indicating a greater need for pain management, which may result in more opioid prescriptions being written. An out-migration of young adults in rural areas has resulted in two consequences that are potentially linked to higher use of

prescription opioids (Keyes et al., 2014). The first consequence is that regions with an older workforce on average have less new economic infrastructure, contributing to the economic instability that may create vulnerability to substance use in these regions. The second consequence is that this creates a selection effect; the young adults who do not leave economically depressed communities may be more vulnerable to substance use. Social conditions, such as economic depression and cultural normalization of opioid use, may also contribute to opioid use in these regions. The tighter community networks in rural communities also may facilitate distribution, as over half of people who used prescription opioids in non-prescribed ways in 2019 obtained them from a friend or relative (U.S. Department of Health and Human Services, 2020). In fact, only 6.2% of people who prescription opioids in non-prescribed ways in 2019 bought them from a drug dealer or other stranger.

Stigmatization of Opioid Use

A group of researchers created a typology of the stigma directed toward people who use opioids from a review of existing literature (McCradden et al., 2019). They identified four main themes. The first type of stigma is interpersonal and structural stigma toward people accessing opioid agonist therapy. Opioid agonist therapy provides controlled medications that reduce opioid cravings and assist with pain management (SAMHSA). People with opioid use disorder have reported feeling unsupported by health care providers who feel that opioid agonist therapy does not represent a legitimate treatment (McCradden et al., 2019). Structural stigma toward opioid agonist therapy creates barriers to access it and disincentivizes people with opioid use disorder from seeking treatment.

The second type of stigma is stigma related to opioids for the treatment of chronic pain. People perceive moral weakness in those who use opioids to treat chronic pain conditions, which can result in patients concealing their opioid consumption from others.

Third, people who use opioids experience stigma in healthcare settings. They also have a mutually distrustful relationship with healthcare providers and have reported feeling judged, having services withheld, and not receiving adequate medical treatment (McCadden et al., 2019).

Finally, people who use opioids experience self-stigma. Many people who use opioids have internalized stigma toward themselves as well, resulting in self-blame and difficulty utilizing social support (McCadden et al., 2019).

A critical content analysis of news media in Canada found that articles tended to dichotomize people who use opioids as either innocent people who developed a substance use disorder from consuming prescription opioids (“legitimate users”) or drug-seeking criminals. The media has increasingly referred to people who use opioids as addicts and policing opioid use is a main topic of discussion in the media (Webster et al., 2020).

Racialization of the Epidemic

White people have been almost twice as likely to engage in “non-medical” prescription use compared to Black people (SAMSHA, 2010), whereas the rate of heroin use has been similar among Black, Latino and White people (SAMSHA, 2014). Media depictions of people with opioid use disorders are highly racialized and White people who use opioids have been portrayed more sympathetically than Black people who use opioids (Netherland & Hansen, 2016). While opioid use is highly stigmatized nationally, White people who die from opioids are often discussed in terms of their “lost potential” and struggle with addiction. In contrast, Black and

Brown people who use opioids are grouped together, criminalized, and portrayed as urban heroin users (Netherland & Hansen, 2016). For example, Staten Island is a predominantly White community with high rates of opioid overdose. Media portrayal of the prevalence of opioid use in Staten Island typically places culpability on physicians, pharmaceutical companies and “invading” Mexican drug dealers (Mendoza et al., 2018). The War of Drugs in the 1980s created fear of people with substance use disorders and disproportionality criminalized Black and Latino communities affected by drug use. White communities, such as Staten Island, have not been subject to the heightened policing that Black communities were during the War on Drugs. In fact, buprenorphine, which is safer and less stigmatized than methadone, is differentially promoted as a safe treatment avenue for suburban, predominantly White communities but not in communities of colors (Mendoza et al., 2018).

Black and urban minority communities also are experiencing an increase in opioid overdose deaths, though at a lower rate than White, rural communities (Drake et al., 2020). The increase in opioid overdose deaths in minority communities may be due to many factors, such as physicians under-prescribing opioids to minority patients because of bias among healthcare providers that minorities have a higher pain tolerance than Whites or less access to medical insurance in this population, among other reasons. This restriction of avenues to access opioids, potentially to treat chronic pain, may facilitate an increase in illegal opioids being circulated in these communities. Minorities may be hesitant to seek formal treatment for opioid use disorder due to fear of being incarcerated as a result of typical criminal responses to substance use in urban communities (Alexander, 2012).

The racially-biased perception of the opioid epidemic has contributed to differential policy and therapeutic intervention responses for primarily White, suburban communities compared to Black and Hispanic communities in urban areas (Mendoza et al., 2018).

Impact on Family and Friends

The stigma associated with opioid use extends to the support system of people who use opioids and can create many negative experiences, particularly after an opioid-related death. Very few studies have examined the experience of people bereaved by substance-related deaths and even fewer have specifically looked at opioid-related death. The studies that do exist have very small sample sizes. Case studies have helped to establish drug-related deaths as “special deaths” that disrupt the bereaved individuals’ sense of familiarity and control (Guy & Holloway, 2007). An early study qualitatively examined how six families in Brazil bereaved by drug overdose were affected by their loss (Da Silva et al., 2007). The sample reported complex emotional reactions to their losses; families that knew their loved one used substances reported some relief that their family member was no longer suffering and that their fear and anticipation of an overdose had ended.

The uniqueness of these types of losses was supported further by a survey of parents whose children had died due to differing causes of death (Feigelman et al., 2011). Parents whose children had died due to an overdose or a suicide, compared to natural or accidental deaths, were more likely to experience complicated grief, psychological distress, and depression. Parents who were grieving these types of death also reported more parent-blaming and child-blaming comments from other people in their lives compared to parents bereaved by natural/accidental deaths. One interview study explored how people in the United Kingdom bereaved by alcohol or substance use-related deaths experienced health care and mortuary services (Walter et al., 2015).

Respondents frequently reported perceiving stigma and judgment from service providers such as police officers, morticians, and first responders. While this stigma was not often direct statements of judgement, cold professionalism during death proceedings was interpreted to be unhelpful and insensitive to grieving family members. The study also found that small acts of kindness from service providers, such as using respectful terminology to describe the deceased, acknowledging the family's loss, and expressing compassion during death disclosure was meaningful to participants and lessened feelings of stigma. Grievors in England and Scotland often reported feeling stigmatized, judged, and that others thought of their family member/friend as a "junkie" or "drug addict" (Templeton et al., 2017). These types of deaths were sometimes accompanied with traumatic experiences such as finding the body, being notified of death by police, and receiving information via police investigation (Templeton et al., 2016). Participants felt stigmatized by police, the media, health care professionals, relatives, friends, and society at large.

People bereaved by an opioid-related death may have witnessed the marginalization of their loved one during their life, as well as experienced stigmatization because of their death. The ostracization and traumatic death circumstances that affects people bereaved by an opioid-related death may result in experiences of disenfranchised grief as well as barriers to coping methods and social support, as discussed below. These variables may be associated with grief outcomes for this population.

Theoretical Framework

Transactional Model of Stress, Appraisal and Coping

The transactional model of stress, appraisal and coping illustrates the process by which a person experiences immediate emotions and long-term effects due a stressful experience

(Lazarus & Folkman, 1987). Cognitive appraisal and coping are central concepts in this theory. Cognitive appraisal is the evaluation by a person of what is occurring and what it means for their wellbeing. The model states that there is a primary appraisal and potentially a secondary appraisal that happens for each event. A primary appraisal tells us what the event means to the individual, if anything. If the event is meaningful in some way, a secondary appraisal tells us if and how the negative effects of the event can be mitigated. Together, these appraisals help determine if the event can be categorized as a harm, threat, challenge, or benefit. This appraisal explains why people may cope differently and experience different emotional outcomes in the same situation (Folkman, 2013). Coping, discussed in depth later in this literature review, acts as a mediator between appraisal and emotional outcomes.

Model of Resilience

The Model of resilience was created to explain how many people demonstrate resilience in the face of traumatic experiences and loss (Mancini & Bonanno, 2009). Resilience is defined as an outcome following a highly stressful event in which the individual experiences minimal disruption in functioning. The model is similar to the transactional model of stress, appraisal and coping (Lazarus & Folkman, 1987) as the loss event is framed as an antecedent and appraisal affects coping which then determines outcomes, such as resilience.

This model also states that individuals may follow one of three grief paths: chronic grief, recovery, and resilience. While all three types may experience intense, acute distress immediately following the loss event, people who have a resilient response will experience very little disruption in functioning, people who have a recovery response will gradually resume normal functioning over an extended period of time, and people experiencing chronic grief will continue to experience acute, persisting, impairing grief symptoms long after the death.

The model introduces novel components by including social support as a predictor of both appraisal processes and coping. It also notes that individual differences (e.g., personality, attachment style, *a priori* beliefs, identity complexity, and capacity for positive emotion and memories) will affect appraisal processes, social support, and coping, while exogenous resources, such as cultural beliefs and practices, financial resources, and physical health affect social support.

Social support is a central component in this model, affecting not only coping, but also having a bidirectional relationship with appraisal of the loss. People with strong support systems may appraise the loss as less harmful than people without existing modes of available support. Similarly, people who appraise the loss as very harmful may access social support differentially than people who do not appraise the loss as harmful.

This model is highly applicable to people grieving an opioid-related death. Discussed below, the disenfranchisement of grief for an opioid-death may be associated with exogenous resources, available social support, and the way in which loss is appraised. This association with support and appraisal may then influence coping, thus affecting grief outcomes. Therefore, this model supports the importance of the constructs of interest in the present study: disenfranchised grief, social support, and coping, as they relate to grief outcomes in populations bereaved by opioid-related deaths.

Disenfranchised Grief

“Disenfranchised grief” refers to a grief experience in which grief is dismissed or invalidated (Attig, 2004; Doka, 1989; Doka, 2002). Grief may be disenfranchised in the following situations: (a) relationships that are non-traditional, secret, viewed as unacceptable, or perceived as not close enough to grieve, such as same-sex partnerships or extra-marital

relationships, (b) losses that are not recognized as a death or a significant loss, such as deaths of pets, abortions, and psychological decline of people with neurodegenerative diseases, (c) griever who are not seen as being capable of grieving, such as children or people with developmental disabilities, (d) circumstances of the death that limit the support offered to griever, such as stigmatized deaths of people with AIDS or addictions, and (e) the way people grieve if it is discrepant from typical grief reactions (Attig, 2004; Doka, 1989; Doka, 2002).

To date, no quantitative assessment of disenfranchised grief has been conducted for adults bereaved by a substance use-related death (Valentine et al., 2016). A few studies have investigated disenfranchised grief in other populations. For example, disenfranchisement occurred for people who experienced the death of a noncustodial parent contingent on the closeness of the pre-loss relationship; if the individual had a distant relationship with the deceased parent, disenfranchisement was more likely to occur (1995).

Disenfranchised Grief and Grief Outcomes

Research investigating the relationship between the experience of disenfranchised grief and grief outcomes, such as prolonged grief and posttraumatic growth, is lacking. One study investigated how coping efficacy, social support, and disenfranchised grief predicted the outcomes of personal growth and complicated grief for certified nursing assistants following the death of nursing home residents (Anderson & Gaugler, 2006). This study found that higher disenfranchised grief was associated with lower levels of personal growth. Coping efficacy and social support were not predictors of personal growth or complicated grief.

Similarly, another study examined outcomes for women who were grieving the loss of a close female friend. Disenfranchised grief was negatively related to posttraumatic growth but not

complicated grief. However, disenfranchised grief was related to coping style, which then predicted complicated grief (Sauber & O'Brien, 2020).

Disenfranchised Grief and Drug-Related Deaths

People whose loved ones die from highly-stigmatized drug-related deaths likely experience disenfranchised grief, self-blame and guilt (Valentine & Walter, 2015). Many factors contribute to the broad devaluation of people who have died from substance use and the disenfranchisement of grief reactions, including the perception that the deceased and/or their loved ones are complicit in the death, moral judgements by media depictions of drug-related deaths, negative stereotypes of people who use substances, and potentially difficult familiar experiences related to the substance use prior to the death (Valentine et al., 2016). Parents who are grieving the death of a child to a substance-related cause may misrepresent the cause of death to those around them (Feigelman et al., 2012). The disenfranchisement of the grief experiences of someone bereaved by a substance-related death suggests that those grieving an opioid-related death may be at a high risk for negative grief outcomes.

Social Support

Social support can be defined as the provision of comfort or assistance, often to help someone cope with a stressful event or circumstance (American Psychological Association). There are many different types of social support, including emotional support, which involves providing love and empathy and has been stated to be the most important form of support (House, 1981), instrumental support, which includes the provision of tangible goods and services, informational support, which involves giving helpful information or advice, and appraisal/affirmational support, which involves helping someone to feel appreciated and provides a sense of social belonging (Langford et al., 1997; Uchino, 2004).

Emotional support as it relates to grief may mean listening to the griever and asking them about their feelings related to the loss, providing a safe space for them to vent, cry, and express themselves, and providing affection such as a hug. Instrumental support may include cooking or cleaning for them and their family, helping with memorial proceedings and doing any tasks that may be difficult for them after the death. Informational support may include providing information about grief, formal resources, and advice for that the deceased may have previously provided. Appraisal/affirmational support may include spending time with them, including them in group activities, and engaging in positive social interactions with them.

The literature on the relationship between social support and grief outcomes remains mixed. One reason why social support may not always account for variance in grief outcomes is that disenfranchised grief may affect the way that social support is received by the griever. Thus, the types of support given by the griever's network may not feel congruent with the type of relationship/loss/griever/grief reactions (Hillowe-Donahue, 2006).

Social support also may not be helpful even when it is offered. A study of women who were grieving the loss of a close female friend reported that all of the grievers categorized some responses to their loss as unhelpful (Sauber & O'Brien, 2020), but social support had a strong, negative association with disenfranchised grief and social support positively predicted both active emotional coping and avoidant emotional coping. Higher social support has also been linked to decreased grief difficulties, depressive symptoms, and suicidality among people who are suicidally-bereaved (Oexle & Sheehan, 2020).

Social Support and Prolonged Grief

A study of 54 African American participants who experienced the death of a loved one due to homicide revealed that the number of people in the griever's support network was

positively related to the quality of general social support they receive and negatively correlated with complicated grief and depression (Burke et al., 2010). This study also demonstrated that the number of anticipated negative relationships, which is the amount of people who might make bereaved angry or upset during the previous month, was associated with higher rates of depression in griever, but not complicated grief. Satisfaction with social support predicted complicated grief, but more research on this relationship is warranted (Villacieros et al., 2014).

Social Support and Posttraumatic Growth

According to one systematic review, some types of social support were related to posttraumatic growth (Michael & Cooper, 2013) while another review found that although social support was not associated with growth after trauma, satisfaction with social support was positively correlated with growth (Linley & Joseph, 2004). In a sample of bereaved individuals due to a death by suicide, perceived social support was associated with personal growth (Oexle & Sheehan, 2020). In a sample of people bereaved by the death of an immediate family member, emotional support, advice/guidance support, social support satisfaction, and network size correlated positively with personal growth (Engelkemeyer, 2009).

Social support has not been studied in people bereaved by opioid-related deaths in quantitative research, but the research highlighted previously indicated that social support may be related to grief outcomes and that people grieving an opioid-related death may be at risk for lower social support than populations affected by other causes of death.

Coping

Coping can be defined as cognitive and behavioral efforts to manage internal and external demands that are appraised as taxing (Lazarus & Folkman, 1984). Coping style, as it relates to grief, refers to processes, strategies, or styles of managing (reducing, mastering, tolerating) the

situation in which bereavement places the individual (Carver, 1997). As discussed above, coping can be dichotomized as either emotion-focused or problem-focused (Folkman & Lazarus, 1984). Coping style has been found to be a predictor of grief outcomes, with active emotional and problem-focused coping found to be adaptive, and avoidant emotional coping to be maladaptive (Folkman, 2013; Sauber & O'Brien, 2020).

Emotion-focused Coping

Emotion-focused coping's primary function is to manage distress (Folkman, 2013). Emotion-focused coping can be dichotomized as either active emotional coping, such as seeking social support, using humor, or venting, or avoidant emotional coping, which includes denial, self-blame, or disengagement with the difficult event (Folkman, 2013; Holahan & Moos, 1987). Coping style has been found to predict grief outcomes such as complicated grief. In a sample of college students grieving the unexpected loss death of a family member, close friend, or romantic partner, avoidant emotional coping, but not problem-focused coping or active emotional coping, predicted complicated grief (Schnider & Grey, 2007). In a study that examined grieving outcomes with women whose best friend died, avoidant emotional coping was correlated with complicated grief (Sauber & O'Brien, 2020). Active emotional coping was moderately correlated with posttraumatic growth, and strongly correlated with problem-focused coping.

Problem-focused Coping

Problem-focused coping's primary function is to manage the problem causing the distress (Folkman, 2013). Problem-focused coping can include strategies such as making plans, seeking instrumental support (such as advice) from others, and taking action to improve the situation. In a systematic review, problem-focused coping was positively associated with positive growth after trauma (Linley & Joseph, 2004). Problem-focused coping also was correlated with post-

traumatic growth for women who were grieving the loss of a close female friend (Sauber & O'Brien, 2020).

Coping with an Opioid-Related Death

To date, no studies have examined coping in individuals bereaved by an opioid-related death, specifically. Qualitative research on people bereaved by drug/alcohol-related deaths indicated that helpful coping strategies may include working to raise awareness of substance use, helping others bereaved by substance use, and engaging in a continuing bond with the deceased (Valentine & Walter, 2015), but specific coping styles in individuals bereaved by an opioid-related death have yet to be explored quantitatively. The existing literature on coping indicates that emotion-focused coping and problem-focused coping may play an important role in predicting grief outcomes for people bereaved by an opioid-related death.

Grief Outcomes

Prolonged Grief

In the grief literature, there are three main terms that describe atypical grief processes: prolonged grief disorder, complicated grief, and persistent complex bereavement disorder. Though these terms have been treated as synonymous in the past, they represent distinct concepts.

Complicated grief is a broader term that describes a grief experience that is severe and impairing over a long period of time (Shear et al., 2013; Shear & Bloom, 2017). Prolonged grief disorder is a condition that is fundamentally similar to complicated grief as it describes lasting grief symptoms that are intense to a clinical degree, but prolonged grief disorder has a more specific criteria created from an algorithm and consolidated by Prigerson and colleagues (2009). Researchers made the distinction that prolonged grief is a diagnosable disorder that should be

included in the DSM and the ICD while complicated grief is not (Maciejewski & Prigerson, 2017).

One study comparing the diagnostic criteria for all three terms found that complicated grief encompasses many different negative, lasting grief responses but has less diagnostic specificity and less predictive validity than prolonged grief disorder and persistent complex bereavement disorder (Maciejewski et al., 2016). In this same study, prolonged grief disorder and persistent complex bereavement disorder were found to represent the same diagnostic entity with similar positive test rates and high diagnostic specificity. The same researchers criticized the more confusing terminology of “persistent complex bereavement disorder.” Other criticisms for persistent complex bereavement disorder include the criteria being overly heterogenous, including symptoms that have not been empirically validated, and not being sufficiently distinguishable from typical grief experience (Boelen & Prigerson, 2012). Thus, the American Psychiatric Association proposed to replace the criteria in the DSM-5 for persistent complex bereavement disorder with the criteria for prolonged grief disorder (American Psychiatric Association, 2020; Boelen et al., 2020).

It should be noted that these specific distinctions have emerged recently and the terms were previously often conflated in the literature. Before the last few years, negative, persistent grief outcomes were generally studied using the umbrella term of “complicated grief.” The Inventory of Complicated Grief (1995), authored by Prigerson and colleagues, was widely used to study this construct, but the authors have revised this measure to produce the PGD-13, a measure that is utilized to study the symptoms of prolonged grief disorder.

Diagnostic Criteria. Prolonged grief disorder is a psychological condition represented by persistent and intense grief symptoms. Prolonged grief disorder was proposed for inclusion in

the *Diagnostic and Statistical Manual of Mental Disorders*, 5th Edition (American Psychiatric Association, 2013). The APA-proposed diagnostic criteria, the psychometrically validated criteria by Prigerson and colleagues, and the criteria in the World Health Organization International Classification of Diseases differ slightly, but share the same core components, including difficulty moving on from the loss, intense yearning for the person who died, and clinical distress that is not explained by another mental disorder (Boelen et al., 2020; Eisma et al., 2020; Prigerson et al., 2009; World Health Organization [WHO], 2018).

Researchers have critiqued the proposed criteria set forth for inclusion in the DSM-5 by the American Psychiatric Association, citing instances where it should be more similar to the Prigerson criteria, including a six-month requirement since the death over a 12-month requirement and more semantic specificity of symptoms (Boelen et al., 2020).

The diagnostic criteria created by Prigerson and colleagues for prolonged grief disorder require that the individual meets the following conditions (Prigerson et al., 2009):

1. Experienced the death of a significant person
2. Experiences yearning for the deceased
3. Have five of nine possible symptoms, including:
 - a. Confusion about one's role in life or diminished sense of self (i.e., feeling that a part of oneself has died)
 - b. Difficulty accepting the loss
 - c. Avoidance of reminders of the reality of the loss
 - d. Inability to trust others since the loss
 - e. Bitterness or anger related to the loss
 - f. Difficulty moving on with life (e.g., making new friends, pursuing interests)

- g. Numbness (absence of emotion) since the loss
 - h. Feeling that life is unfulfilling, empty, or meaningless since the loss
 - i. Feeling stunned, dazed or shocked by the loss
4. At least six months have passed since the loss
 5. Clinical impairment is present
 6. The disturbance is unaccounted for by other mental disorders

Prolonged grief disorder has found to be distinct from both depression and anxiety, as well as major depressive disorder, generalized anxiety disorder, and posttraumatic stress disorder (Prigerson et al., 1996; Priegerson et al., 2009).

Prevalence. Prolonged grief disorder may be present in a significant portion of people who are grieving a death. A Danish meta-analysis determined that approximately one in 10 bereaved adults (9.8%, 11% when adjusting for publication bias) are at risk for prolonged grief disorder (Lundorff et al., 2017). A German study determined that complicated grief may be present for 3.7% of the general population and 6.7% of people who had experienced a significant loss (Kersting et al., 2011). In a study based in the Netherlands (Newson et al., 2011), 4.8% of older adults sampled were experiencing complicated grief, but 25.4% of older adults who responded affirmatively to the question, “Are you currently experiencing grief?” experienced complicated grief. The discrepancy in determining an appropriate timeframe for the death between these studies may have contributed to the differences in complicated grief/prolonged grief prevalence among those who had experienced a death. Perceiving a death as sudden or unexpected puts individuals at a higher risk for developing prolonged grief disorder (Goldsmith et al., 2008). A unique risk factor for complicated grief is separation anxiety during childhood, which does not predict major depressive disorder, generalized anxiety disorder, or posttraumatic

stress disorder (Vanderwerker et al., 2006). Similarly, an avoidant attachment is associated with complicated grief (Sauber & O'Brien, 2020).

Bereaved African Americans have been found to be at higher risk for prolonged grief disorder than White people, with a prevalence as high as 21.2%, even when controlling for variables such as education, social support, religious coping, and rates of exposure to sudden death (Goldsmith et al., 2008). The underlying causes of this discrepancy are unknown, but one study found that bereaved African American college students were less likely to access professional services and that they were more likely to be grieving a death due to homicide than their bereaved White classmates (Laurie & Neimeyer, 2008). Other hypothesized factors that may be linked to higher rates of prolonged grief include racial discrimination playing a role in their loved one's death and higher closeness of kinship networks leading to more devastating bereavement processes, though more research is needed (Laurie & Neimeyer, 2008)

Prolonged Grief Disorder in Populations Bereaved from Traumatic Deaths. A meta-analysis found the prevalence of prolonged grief disorder to be 49% in populations bereaved from unnatural deaths, such as violence, suicide, or natural disasters (Djelantik et al., 2020). While this population did not include opioid-related deaths, it speaks to the unique level of distress that may result from deaths that are unexpected or untimely. As discussed above, parents who have lost their children to overdose or suicide deaths are more likely to experience complicated grief than parents who have lost their children to natural or accidental deaths (Feigelman et al., 2011).

Prolonged grief has not been studied in populations bereaved by opioid-related death, but the prior findings suggest that people bereaved by opioid-related deaths may be at risk for prolonged grief disorder and that investigation of prolonged grief in this population is crucial.

Posttraumatic Growth

Posttraumatic growth is positive change that results from the struggle with a difficult life crisis (Tedeschi & Calhoun, 2004). This can occur in five domains of growth, including increased appreciation for life, more intimate and meaningful relationships with others, a sense of increase personal strength, identification of new possibilities for one's life, and spiritual growth.

The occurrence of posttraumatic growth does not imply that a life event was not profoundly disturbing or challenging, but represents the positive adaptations that one may make in response to negative circumstances. Posttraumatic growth does not occur simply as a result of the traumatic event, but instead, is affected by the processes that the individual engages in as a response to the event. It has been hypothesized that the occurrence of such growth is affected by rumination and cognitive processing, self-disclosure, narrative development, social support, enduring stress, and wisdom (Tedeschi & Calhoun, 2004).

Prevalence. The literature on the prevalence of posttraumatic growth after a death is mixed and limited. A meta-analysis found that 52.58% of people who experienced a traumatic event reported moderate-to-high posttraumatic growth (Wu et al., 2019). A study with small sample of 20 young adults found that 100% of the sample reported some type of posttraumatic growth as measured with a qualitative interview (Stein et al., 2018). Research on demographic variables related to posttraumatic growth has been mixed, however a meta-analysis found that women were more likely to experience posttraumatic growth than men and that ethnic minorities reported greater posttraumatic growth than non-minorities (Helgeson et al., 2006). A systematic review of the literature indicated that people who experienced posttraumatic growth also experienced lower levels of negative grief outcomes (Michael & Cooper, 2013). Posttraumatic

growth for bereaved individuals may be partially determined by variables such as time since the death, personality traits, social support, religiosity, coping and meaning-making (Michael & Cooper, 2013; Sauber & O'Brien, 2020; Tedeschi & Calhoun, 2004).

Posttraumatic growth and prolonged/complicated grief may seem like opposite constructs, one being a generally positive grief outcome and one being a negative grief outcome, but they are not mutually exclusive. One study of traumatically bereaved siblings and close friends found no relationship between complicated grief and posttraumatic growth (Johnsen & Afgun, 2020). The components of posttraumatic growth and complicated grief may have a multidirectional causal relationship, with both positive and negative associations existing between core components of each, but more research is warranted to examine the relationships among these constructs (Bellet et al., 2018).

Also, posttraumatic growth has not been investigated in populations bereaved by opioid-related death. Due to the unique grief experience of this population, exploration of this construct for people grieving an opioid-related death may provide important, novel insights on the relationship between death circumstances and posttraumatic growth.

Research Questions and Hypotheses

To what degree did disenfranchised grief, social support, and coping style contribute to the prediction of prolonged grief and posttraumatic growth for people who were grieving the death of a significant individual due to opioid use?

H1: Disenfranchised grief, social support, and coping style would collectively account for variance in prolonged grief.

1. Disenfranchised grief would contribute unique variance to the prediction of prolonged grief
 - a. Disenfranchised grief would be related positively to prolonged grief

2. Social support would contribute unique variance to the prediction of prolonged grief
 - a. Emotional/informational social support would be related negatively to prolonged grief
 - b. Tangible social support would be related negatively to prolonged grief
 - c. Affectionate social support would be related negatively to prolonged grief
 - d. Positive social interactions would be related negatively to prolonged grief
3. Coping style would contribute unique variance to the prediction of prolonged grief
 - a. Problem-focused coping would be related negatively to prolonged grief
 - b. Avoidant emotional coping would be related positively to prolonged grief
 - c. Active emotional coping would be related negatively to prolonged grief

H2: Disenfranchised grief, social support, and coping style would collectively account for variance in posttraumatic growth.

1. Disenfranchised grief would contribute unique variance to the prediction of posttraumatic growth
 - a. Disenfranchised grief would be related negatively to posttraumatic growth
2. Social support would contribute unique variance to the prediction of posttraumatic growth
 - a. Emotional/informational social support would be related positively to posttraumatic growth
 - b. Tangible social support would be related positively to posttraumatic growth
 - c. Affectionate social support would be related positively to posttraumatic growth
 - d. Positive social interactions would be related positively to posttraumatic growth
3. Coping style would contribute unique variance to the prediction of posttraumatic growth
 - a. Problem-focused coping would be related positively to posttraumatic growth
 - b. Avoidant emotional coping would be related negatively to posttraumatic growth

c. Active emotional coping would be related positively to posttraumatic growth

Appendix B

Inclusion Criteria, Validity Checks and Survey Directions

Inclusion Questions

1. Are you at least 18 years old?
 Yes
 No
2. Have you experienced an opioid-related death of a family member/friend/romantic partner?
 Yes
 No
3. Did this family member/friend/romantic partner die between 6 and 24 months ago?
 Yes
 No
4. Are you currently residing in the United States?
 Yes
 No

Please click the box below.

I am not a robot (Recaptcha software via Qualtrics)

Validity Checks

1. Please select “All of the time” for this question. (Embedded in MOSSSS)
2. Please select “Quite a bit” for this question. (Embedded in PG-13)
3. *[Participants were asked their age two separate times in demographic form. Participants were not automatically removed if they entered discrepant answers, but discrepant answers were examined as a potential indicator of fraud.]*

Survey Directions (Gift Card Survey)

(Will appear after inclusion criteria and consent form, before measures).

In this survey, we will ask you a series of questions about the opioid-related death of your family member, friend, or romantic partner. If you have experienced multiple opioid-related deaths, please focus on the death that had the biggest impact on you.

If you experience any distress during this survey, you can take a break and come back at another time within two weeks of beginning the survey, or you can leave the survey.

At the end of the survey, you will have the opportunity to submit your email so that you can receive your \$10 Amazon Gift Card to thank you for your participation.

Survey Directions (SONA Survey)

(Will appear after inclusion criteria and consent form, before measures).

In this survey, we will ask you a series of questions about the opioid-related death of your family member, friend, or romantic partner. If you have experienced multiple opioid-related deaths, please focus on the death that had the biggest impact on you.

If you experience any distress during this survey, you can take a break and come back at another time within two weeks of beginning the survey, or you can leave the survey.

At the end of the survey, you will be redirected to a separate survey where will have the opportunity to submit your name and University ID so that you can receive SONA credit. You also have the option to submit your email so that you can be contacted for future studies about grief and loss.

Appendix C

Demographic Questionnaire

1. Your age: _____

2. What is your current gender identity?

- Woman
 - Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to self-describe
- _____

3. What was the nature of your relationship with family/friend/romantic partner who died due to opioid use? Check all that apply.

- Family member
- Friend
- Romantic partner
- Other _____

IF **“Family member”** is selected:

3a. What was your family member’s relationship to you?

- Your child
- Your parent
- Your sibling
- Your stepparent
- Your stepsibling
- Your aunt or uncle
- Your grandparent
- Your grandchild
- Your cousin
- Other _____

IF **“child”** is selected:

3b. What was your child’s gender identity at death?

- Woman
 - Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to describe
- _____

IF **“parent”** is selected:

3c. What was your parent’s gender identity at death?

- Woman

- Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to describe
-

IF “sibling” is selected:

3d. What was your sibling’s gender identity at death?

- Woman
 - Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to describe
-

IF “stepparent” is selected:

3e. What was your stepparent’s gender identity at death?

- Woman
 - Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to describe
-

IF “stepsibling” is selected:

3f. What was your stepsibling’s gender identity at death?

- Woman
 - Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to describe
-

IF “aunt or uncle” is selected:

3g. What was your aunt or uncle’s gender identity at death?

- Woman
 - Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to describe
-

IF “grandparent” is selected:

3h. What was your grandparent’s gender identity at death?

- Woman
- Man

- Non-binary
 - Prefer not to disclose
 - Prefer to describe
-

IF “grandchild” is selected:

3i. What was your grandchild’s gender identity at death?

- Woman
 - Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to describe
-

IF “cousin” is selected:

3j. What was your cousin’s gender identity at death?

- Woman
 - Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to describe
-

IF “other” is selected:

3k. What was your family member’s gender identity at death?

- Woman
 - Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to describe
-

IF “**Romantic partner**” is selected:

3k. What was your romantic partner’s gender identity at death?

- Woman
 - Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to describe
-

3l. How long had you been in a relationship? _____ Years _____ Months

IF “**Friend**” is selected:

3m. What was your friend’s gender identity at death?

- Woman
 - Man
 - Non-binary
 - Prefer not to disclose
 - Prefer to describe
-

3n. How long had you been friends? _____ Years _____ Months

4. Was your family member/friend/romantic partner living in the same home as you at the time of their death?

- Yes
- No

5. Family member/friend/romantic partner's age at death: _____

6. How close was your relationship with the deceased at the time of their death?

Not at all close 1	2	3	4	5	6	Extremely close 7
--------------------------	---	---	---	---	---	-------------------------

7. How often did you talk to your family member/friend/romantic partner?

- Every day
- Every week
- Once or twice a month
- Every few months
- Other _____

8. How long has it been since the death of your family member/friend/romantic partner?
Months [drop down] _____

9. How did your family member/friend/romantic partner die (cause of death)?

- Opioid overdose
- Health complications *directly* related to opioid use (specify: _____)
- Health complications *indirectly* related to opioid use (specify: _____)
- Other _____

10. Would you consider the death expected or unexpected?

- Expected
- Unexpected
- Other _____

11. Which of the following best represents your racial and/or ethnic heritage? Select all that apply.

- Black, Afro-Caribbean, African-American
- Latino, Hispanic-American
- White, European-American
- Asian, Asian-American, Pacific Islander
- Native American/Indigenous Peoples
- Biracial/multiracial _____
- Prefer to self-describe _____

12. Highest level of education completed:

- Did not complete high school
- High school/GED
- Some college
- Associate degree
- Bachelor's degree
- Master's degree
- Doctorate, professional degree

13. Which of the following best represents your sexual orientation?

- Straight
- Bisexual
- Lesbian, gay
- Other _____

14. Relationship status:

- Single
- Together, never married
- Married
- Separated
- Divorced
- Widowed

15. How many children do you have, if any? _____

- None
- 1
- 2
- 3
- 4
- 5 or more

16. Employment status:

- Full time employment
- Part time employment

- Unemployed
- Retired
- Student
- Other _____

17. If employed, what is your current occupation? _____

18. If unemployed, what was your last occupation? _____

19. If unemployed, when were you last employed? Month _____ Year _____

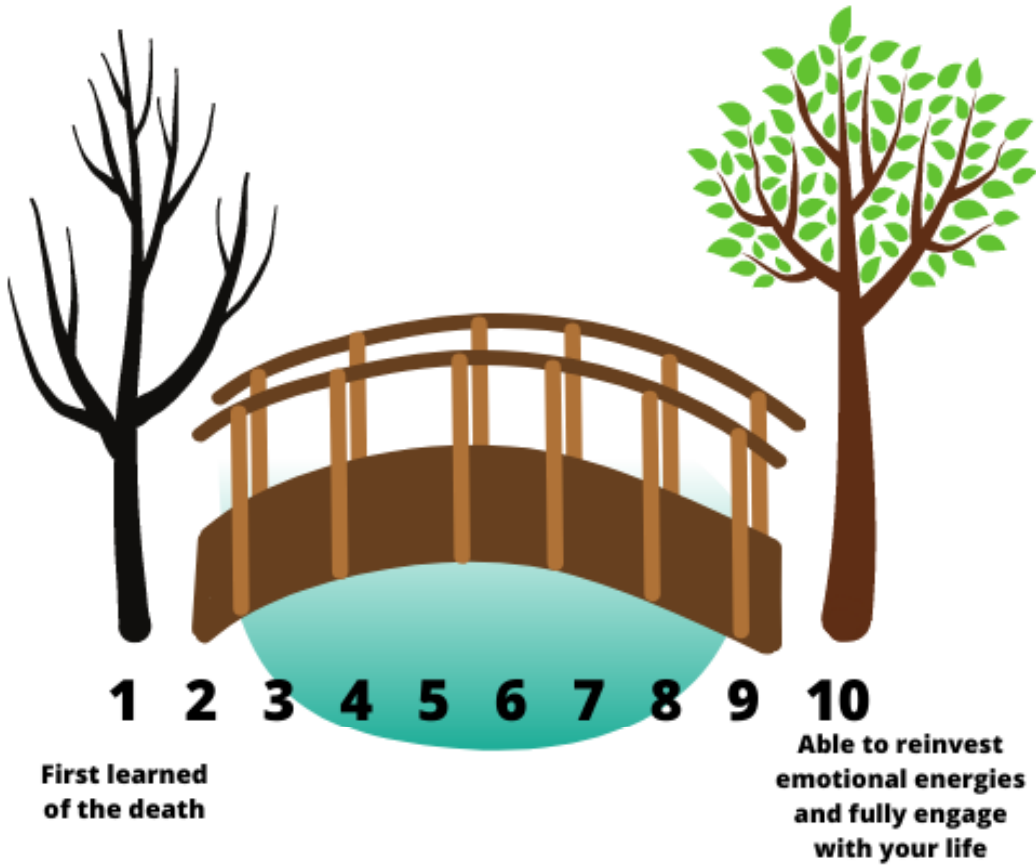
20. What is your household income?

- Below \$20,000
- \$20,000-\$39,999
- \$40,000-\$59,999
- \$60,000-\$79,999
- \$80,000-\$99,999
- \$100,000-\$119,999
- \$120,000-\$139,999
- \$140,000 or more

21. What support/treatment services have you used after your loss, if any? Check all that apply.

- Individual counseling
- Group counseling
- Community support groups
- Chaplain/religious/spiritual counseling
- Other: _____

Visualize the grief process as a bridge that is 10 miles long. When you experience a loss, the bridge has to be crossed before you can reinvest emotional energies and fully engage with your life. With that in mind, where on the bridge are you now? See the picture below to visualize the 10-mile mourning bridge.



Where on the bridge are you?

1 2 3 4 5 6 7 8 9 10

22. How did you learn about this study?

- Listserv (which one? _____)
- Directly from someone I know
- A support group
- Social media
- University of Maryland SONA
- Other: _____

23. To what degree are you struggling with substance use?

Not at all 1	2	3	4	5	6	To a great degree 7
-----------------	---	---	---	---	---	------------------------

To what degree do you agree with the following statements?

24. I would willingly accept someone who has been treated for substance use as a close friend (r)

Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
------------------------	---	---	---	---	---	---------------------

25. I believe that someone who has been treated for substance use is just as trustworthy as the average citizen (r)

Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
------------------------	---	---	---	---	---	---------------------

26. I would accept someone who has been treated for substance use as a teacher of young children in a public school (r)

Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
------------------------	---	---	---	---	---	---------------------

27. I would hire someone who has been treated for substance use to take care of my children (r)

Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
------------------------	---	---	---	---	---	---------------------

28. I think less of a person who has been in treatment for substance use.

Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
------------------------	---	---	---	---	---	---------------------

29. I would hire someone who has been treated for substance use if they are qualified for the job (r)

Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
------------------------	---	---	---	---	---	---------------------

30. If I was an employer, I would pass over the application of someone who has been treated for substance use in favor of another applicant.

Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
------------------------	---	---	---	---	---	---------------------

31. I would be willing to date someone who has been treated for substance use if I were single and dating (r)

Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
------------------------	---	---	---	---	---	---------------------

Appendix D

Gift Card Claim Survey

1. Name: _____
2. Provide your email to claim your Amazon Gift Card (available only to people who qualify for the study and answer all questions in a non-fraudulent manner):

3. Email address confirmation: _____
4. Would you be willing to be contacted by the researchers for future studies related to loss?
 Yes
 No

Please click on the red arrow at the bottom of this page (**this arrow must be clicked** to submit your email address). Thank you!

Below are some resources that may be helpful to you and the contact information for the investigator.

GRASP – Grief Recovery After a Substance Passing

<http://grasphelp.org/>

Grief Recovery After Substance Passing (GRASP) was created to offer understanding, compassion, and support for those who have lost someone they love through addiction and overdose. GRASP offers free local support meetings as well as grief resources.

Dougy Center

www.dougy.org

The Dougy Center is The National Center for Grieving Children & Families provides grief resources.

American Psychological Association Psychologist Locator

<https://locator.apa.org/>

This link provides a listing of APA licensed psychologists, including their specializations. You can select “Grief/Loss” as a specialty to refine your search.

SAMHSA’s National Helpline

1-800-662-HELP (4357)

<https://www.samhsa.gov/find-help/national-helpline>

SAMHSA’s National Helpline is a free, confidential, 24/7, 365-day-a-year treatment referral and information service (in English and Spanish) for individuals and families facing mental and/or substance use disorders.

If you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigators:

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Appendix E

WITNESSING OF DISENFRANCHISED GRIEF (WDG; St. Clair, 2013)

Consider the extent to which you felt that you had people in your life who understood your loss and answer the following questions regarding the **opioid-related death of your family member/friend/romantic partner**.

	Strongly Disagree (5)	Disagree (4)	Unsure (3)	Agree (2)	Strongly Agree (1)
1. People in my life understood the full extent of my loss.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. People in my life felt sorry for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. People in my life tried to meet my physical needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. People in my life talked about what I had lost.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. People in my life focused on my emotional pain.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. People in my life could see that I had a right to grieve.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I felt free to express grief in the presence of people in my life 6 months after the loss.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. People in my life still remember my loss.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. No one can understand why I still feel the need to talk about the loss. (R)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. No one remembers my loss. (R)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. People in my life reached out to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I knew that people in my life understood because people in my life had a similar loss.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. The world doesn't want to hear the story of my loss. (R)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. My loss is easier to bear because of the people in my life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. People in my life can testify to the world that I have a right to grieve the loss.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. I knew that people in my life understood my loss just by what they said to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I find comfort in knowing that people in my life want to listen to my story.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I knew that people in my life understood my loss just by what they did for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I knew that the people in my life understood when I looked into their eyes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. No one was more helpful to me than the people in my life who understood.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Knowing that I had people in my life who understood was a great comfort to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Without the people in my life, I would have carried the emotional pain of my loss alone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix F

THE MOS SOCIAL SUPPORT SURVEY FOR BEREAVEMENT
 (adapted for bereavement from the Medical Outcomes Study Social Support Survey by
 Sherbourne & Stewart, 1991)

Next are some questions about the support that is available to you after the **opioid-related death of your family member/friend/romantic partner**.

About how many close friends and close relatives do you have (people you feel at ease with and can talk to about what is on your mind related to your loss)?

Write in number of close friends and close relatives: _____

Instructions: People sometimes look to others for companionship, assistance, or other types of support after someone has died. How often has each of the following kinds of support been available to you **since the death of your significant person**?

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
1. Someone to help you if you were having trouble getting out of bed	1	2	3	4	5
2. Someone you can count on to listen to you when you need to talk about your loss	1	2	3	4	5
3. Someone who gives good advice about your loss	1	2	3	4	5
4. Someone to take you to appointments or events if needed	1	2	3	4	5
5. Someone who shows you love and affection	1	2	3	4	5
6. Someone to have a good time with	1	2	3	4	5
7. Someone to give you information to help you understand a situation related to your loss	1	2	3	4	5
8. Someone to confide in or talk to about yourself or your problems related to the loss	1	2	3	4	5
9. Someone who hugs you	1	2	3	4	5
10. Someone to get together with for relaxation	1	2	3	4	5

11. Someone to prepare your meals if you felt unable to do so	1	2	3	4	5
12. Someone whose advice you really want about your loss	1	2	3	4	5
13. Someone to do things with to help you get your mind off of your loss	1	2	3	4	5
14. Someone to help with daily chores if you felt unable to do them	1	2	3	4	5
15. Someone to share your most private worries and fears about the loss	1	2	3	4	5
16. Someone to turn to for suggestions about how to deal with your loss	1	2	3	4	5
17. Someone to do something enjoyable with	1	2	3	4	5
18. Someone who understands your problems related to your loss	1	2	3	4	5
19. Someone to love and make you feel wanted	1	2	3	4	5

Factor	Item numbers
1) Emotional/informational support	2*, 3*, 7*, 8*, 12*, 15*, 16*, 18*
2) Tangible support	1*, 4*, 11*, 14*
3) Affectionate support	5, 9, 19
4) Positive social interaction**	6, 10, 13*, 17

Items that were adjusted from original measure are marked with an asterisk.

**According to factor analysis in the initial study (Sherbourne & Stewart, 1991), item 13 loaded on both the positive social interaction factor and the emotional/informational support factor in the initial study, but has been included in the positive social interaction subscale in subsequent studies (Giangrasso & Casale, 2014; Law, 2014)

Appendix G

Brief COPE (Carver, 1997)

These statements describe ways you may have been coping with the **opioid-related death of your family member/friend/romantic partner**. Each statement says something about a particular way of coping. We want to know to what extent you've been doing what the statement says. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it. To what extent have you used each of the following coping methods to cope with the **opioid-related death of your family member/friend/romantic partner**?

- 1 = I haven't been doing this at all
- 2 = I've been doing this a little bit
- 3 = I've been doing this a medium amount
- 4 = I've been doing this a lot

	I haven't been doing this at all (1)	I've been doing this a little bit (2)	I've been doing this a medium amount (3)	I've been doing this a lot (4)
1. I've been turning to work or other activities to take my mind off things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I've been concentrating my efforts on doing something about the situation I'm in.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I've been saying to myself "this isn't real."	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I've been using alcohol or other drugs to make myself feel better.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I've been getting emotional support from others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I've been giving up trying to deal with it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I've been taking action to try to make the situation better.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I've been refusing to believe that it has happened.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I've been saying things to let my unpleasant feelings escape.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I've been getting help and advice from other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I've been using alcohol or other drugs to help me get through it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I've been trying to see it in a different light, to make it seem more positive.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I've been criticizing myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I've been trying to come up with a strategy about what to do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(midpoint reminder for participants):
Remember to respond to these items describing the extent to which you have used each of the following coping methods to cope with the **opioid-related death of your family member/friend/romantic partner**.

15. I've been getting comfort and understanding from someone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I've been giving up the attempt to cope.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I've been looking for something good in what is happening.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I've been making jokes about it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I've been accepting the reality of the fact that it has happened.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. I've been expressing my negative feelings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I've been trying to find comfort in my religion or spiritual beliefs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. I've been trying to get advice or help from other people about what to do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. I've been learning to live with it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I've been thinking hard about what steps to take.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. I've been blaming myself for things that happened.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. I've been praying or meditating.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. I've been making fun of the situation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PROBLEM FOCUSED COPING ITEMS

Active Coping (a= .68)

- I've been concentrating my efforts on doing something about the situation I'm in. (2)
- I've been taking action to try to make the situation better. (7)

Planning (a= .73)

- I've been trying to come up with a strategy about what to do. (14)
- I've been thinking hard about what steps to take. (25)

Religion (a= .82)

- I've been trying to find comfort in my religion or spiritual beliefs. (22)
- I've been praying or meditating. (27)

Using Instrumental Support (a= .64)

- I've been trying to get advice or help from other people about what to do. (23)
- I've been getting help and advice from other people. (10)

ACTIVE EMOTIONAL COPING ITEMS

Positive Reframing (a= .64)

- I've been trying to see it in a different light, to make it seem more positive. (12)
- I've been looking for something good in what is happening. (17)

Acceptance (a= .57)

- I've been accepting the reality of the fact that it has happened. (20)
- I've been learning to live with it. (24)

Humor (a= .73)

- I've been making jokes about it. (18)
- I've been making fun of the situation. (28)

Using Emotional Support (a= .71)

- I've been getting emotional support from others. (5)
- I've been getting comfort and understanding from someone. (15)

Venting (a= .50)

- I've been saying things to let my unpleasant feelings escape. (9)
- I've been expressing my negative feelings. (21)

AVOIDANT EMOTIONAL COPING ITEMS

Self-Distraction (a= .71)

- I've been turning to work or other activities to take my mind off things. (1)
- I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping. (19)

Denial (a= .54)

- I've been saying to myself "this isn't real." (3)
- I've been refusing to believe that it has happened. (8)

Substance Use (a= .90)

- I've been using alcohol or other drugs to make myself feel better. (4)
- I've been using alcohol or other drugs to help me get through it. (11)

Behavioral Disengagement (a= .65)

- I've been giving up trying to deal with it. (6)
- I've been giving up the attempt to cope. (16)

Self-Blame (a= .69)

- I've been criticizing myself. (13)
- I've been blaming myself for things that happened. (26)

Appendix H

PROLONGED GRIEF DISORDER (PG-13-Revised; Preigerson et al., 2021)

Please answer the following questions about your experience since the **opioid-related death of your family member/friend/romantic partner**.

For each item below, please indicate how you currently feel?

Item ID	Since the death, or as a result of the death...	Not at all	Slightly	Somewhat	Quite a bit	Overwhelmingly
1	do you feel yourself longing or yearning for the person who died?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	do you have trouble doing the things you normally do because you are thinking so much about the person who died?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	do you feel confused about your role in life or feel like you don't know who you are any more (i.e., feeling like that a part of you has died) ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	do you have trouble believing that the person who died is really gone?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	do you avoid reminders that the person who died is really gone?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	do you feel emotional pain (e.g., anger, bitterness, sorrow) related to the death??	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	do you feel that you have trouble re-engaging in life (e.g., problems engaging with friends, pursuing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	interests, planning for the future)?					
8	do you feel emotionally numb or detached from others?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	do you feel that life is meaningless without the person who died?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	do you feel alone or lonely without the deceased?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. have the symptoms above caused significant impairment in social, occupational, or other important areas of functioning? Yes/No

Appendix I

THE POST TRAUMATIC GROWTH INVENTORY (PTGI; Tedeschi & Calhoun, 1996)

Please answer the following questions about your experience since the **opioid-related death of your family member/friend/romantic partner**.

Indicate for each of the statements below the degree to which this change occurred in your life *as a result of the death*, using the following scale.

- 0 = I did not experience this change *as a result of the death*.
- 1 = I experienced this change to a very small degree *as a result of the death*.
- 2 = I experienced this change to a small degree *as a result of the death*.
- 3 = I experienced this change to a moderate degree *as a result of the death*.
- 4 = I experienced this change to a great degree *as a result of the death*.
- 5 = I experienced this change to a very great degree *as a result of the death*.

	Did not (0)	A very small degree (1)	A small degree (2)	A moderate degree (3)	A great degree (4)	A very great degree (5)
1. I changed my priorities about what is important in life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I have a greater appreciation for the value of my own life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I developed new interests.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I have a greater feeling of self-reliance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I have a better understanding of spiritual matters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I more clearly see that I can count on people in times of trouble.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I established a new path for my life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I have a greater sense of closeness with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I am more willing to express my emotions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I know better that I can handle difficulties.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I am able to do better things with my life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I am better able to accept the way things work out.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I can better appreciate each day.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. New opportunities are available which wouldn't have been otherwise.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I have more compassion for others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I put more effort into my relationships.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I am more likely to try to change things which need changing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I have a stronger religious faith.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I discovered that I'm stronger than I thought I was.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I learned a great deal about how wonderful people are.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. I better accept needing others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PTGI Factors

Factor I: Relating to Others
6,8,9,15,16,20,21

Factor II: New Possibilities
3,7,11,14,17

Factor III: Personal Strength
4,10,12,19

Factor IV: Spiritual Change
5,18

Factor V: Appreciation of Life
1,2,13

Appendix J

QUALITATIVE EXPERIENCE (OPTIONAL)

Instructions that appear for gift card participants:

*Thank you so much for the time and energy you spent completing this survey. You will have the opportunity to submit your information to receive a gift card on the next page, but before you finish, we would like to provide the opportunity for you to share more about your experience since the **opioid-related death of your family member/friend/romantic partner.***

Instructions that appear for SONA participants:

*Thank you so much for the time and energy you spent completing this survey. You will have the opportunity to submit your information to receive SONA credit on the next page, but before you finish, we would like to provide the opportunity for you to share more about your experience since the **opioid-related death of your family member/friend/romantic partner.***

1. What was the most difficult part of your grief experience? (optional)

2. What was most helpful to you after the death? (optional)

3. What would you like others to know about your grief experience? (optional)

4. Would you like to share anything else with the researchers? (optional)

Thank you so much for sharing your experiences with us.

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