

A Cross-Sectional Examination of Sudden Death Bereavement in University Students

by

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### Abstract

**Background:** This thesis addresses the topic of sudden death bereavement in university students. Sudden death bereavement is due to the sudden, unexpected loss of a loved one. It often occurs in a traumatic manner, which can contribute to adverse psychological and physical outcomes, including increased mortality risk. University students are a vulnerable population for poor mental health outcomes, and the sudden loss of a loved one is the most common traumatic event reported in this population. Therefore, we aim to add to the knowledge about the prevalence of this phenomenon in university students, outcomes following sudden bereavement, and factors associated with these outcomes.

**Method:** Using a survey method that was administered online, introductory psychology students provided sociodemographic information and bereavement related information. They also completed questionnaires on mental health status, including depression, generalized anxiety, complicated grief, Post Traumatic Stress Disorder (PTSD), and alcohol use. They finally completed questionnaires on help-seeking behaviour and coping.

**Results:** Results from our study indicated that the sudden loss of a loved one is highly prevalent among university students. Sudden death bereaved university students were more likely to experience negative outcomes, such as complicated grief, even when the time since death, relationship to the deceased, and closeness of the relationship were taken into account. Rumination and avoidance were associated with poorer mental health outcomes with regards to depression, generalized anxiety, suicidal ideation, and posttraumatic stress disorder. Sudden death bereaved students who had significant mental health concerns were more likely to seek help.

**Conclusions:** The sudden loss of a loved one has substantial negative effects on mental health among university students. Therapeutic interventions that promote more adaptive coping strategies could help students as they cope with the sudden loss of a loved one. Additionally, providing a variety of effective resources on campus for bereaved students, including peer support, could potentially reach more bereaved students.

*Keywords:* Sudden-death bereavement, university students, complicated grief, help-seeking, coping style

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## **Chapter One: General Introduction**

Despite the ubiquity of bereavement, different factors that can affect how someone experiences bereavement, including the circumstances surrounding the death (Miyabayashi & Yasuda, 2007). One such circumstance is sudden death bereavement. Sudden death includes death which occurs within twenty-four hours of the first onset of symptoms; e.g., death due to heart attacks, strokes, and pulmonary emboli (Gurger, Turkoglu, Atescelik et al., 2014). Sudden death also refers to a "death that could not have been predicted at the time which occurred suddenly or within a matter of days" (Pitman, Rantell, Moran et al., 2017, p2). Therefore, this includes traumatic, unexpected deaths such as deaths due to accidents and other unintentional injuries, e.g., overdoses, as well as deaths due to suicides and homicides (Pitman et al., 2014). Sudden bereavement compared to non-sudden bereavement is associated with more negative mental, physical, social, and emotional consequences (Bolton et al., 2013; Kristensen, Weisæth, & Heir, 2012; Lindqvist et al., 2008; Séguin, Lesage, & Kiely, 1995; Sveen & Walby, 2008)

### **Definitions of Grief and Bereavement**

Grief, mourning, and bereavement are terms that have been used interchangeably in popular culture. Bereavement is the term applied to individuals who have experienced losses due to death (Meagher & Balk, 2013). Grief refers to the reaction to the loss, whether it be emotional, behavioural, cognitive, spiritual or social (Meagher & Balk, 2013). Mourning is the socially recognized outward expression of grief guided by the cultural, spiritual and social norms (Hooyman & Kramer, 2006; Meagher & Balk, 2013). For a large majority of people, a typical course of grief lasts up to 6 months and requires no treatment (Stroebe, Schut, & Stroebe, 2007a). Historically, while we generally do not consider grief to be a pathological condition, grief is accompanied by unpleasant emotional and physical symptoms, (Rush, 1962).

Freud (1917) described grief as an active process by which individuals attempt to detach emotionally from the loved one. Freud distinguished between grief and melancholia; the former due to the loss of a loved one through death, whereas the latter was a condition attributed to any form of loss and was not context-specific. According to Freud, melancholia has no understandable context, and therefore, has the potential to become a disease.

In fact, Freud stated that:

"mourning involves grave departures from the normal attitude to life, it never occurs to us to regard it as a pathological condition and to refer it to medical treatment. We rely on it being overcome after a certain lapse of time, and we look upon any interference with it as useless or even harmful" (Freud, 1917, p 243).

Engel (1961) classified grief as a psychological disorder with a clear etiology (the loss of a loved one) and a consistent course with identifiable signs and symptoms, including sadness, anger, guilt, and insomnia. Grief is often considered a natural process from which one is expected to 'recover' without intervention. However, Engel (1961) observed that support is often provided for natural ubiquitous physical conditions such as burns. He outlined the necessity of more research into grief to ease the suffering of the bereaved.

Bowlby (1981) suggested that for disorders such as depression and anxiety, the precipitating event is often a loss of some kind; therefore, grief is pathologically manifesting itself. The bereaved must begin to come to terms with their loss, by establishing a new narrative which incorporates both the life and death of the deceased. "Abnormal" patterns of grief stem from difficulty adapting to the loss by establishing a new narrative. According to Bowlby (1981), in grief research, we need to differentiate between "normal" and "abnormal" mourning, as well as understand why people respond differently to loss.

Multiple theories and frameworks attempt to explain the individual differences in coping with loss. Central to these frameworks is the notion that for an individual to adapt to the loss and continue their life successfully, some grief work has to be completed. Grief work includes release from the bonds to the deceased, adjusting to a life without the deceased, and forming new relationships (Lindemann, 1944). For the sudden death bereaved, the grief work may take a different course compared to general bereavement; however, many theories delineate the process of general bereavement. Therefore, as we examine different theories, it is essential to consider them within the lens of sudden death bereavement.

### **Theoretical Perspectives on Grief and Bereavement**

Almost all approaches to bereavement focus on how people adapt to bereavement. These approaches are more focused on loss in general rather than a particular type of loss. Older approaches to understanding bereavement often believe grief follows a linear pattern and a lack of progress in these stages could constitute problematic grieving (e.g. Kubler-Ross, 1969). A critique of the stage approach of grief is that they may be too prescriptive and thus risk pathologizing reactions that deviate from the expected trajectory (Bennett & Bennett, 2000).

Given that bereavement is a stressful experience, some stress theories have parallels with theories of bereavement (Bennett & Soulsby, 2012). The Cognitive Stress Theory posits that through a process of cognitive appraisal, individuals experience a given situation as stressful when their coping resources exceed the demands for the situation, and when the situation personally meaningful (Lazarus & Folkman, 1984). The Dual Process Model (DPM) brings together stress-response and grief response models (Stroebe & Schut, 1999) and is one of the most widely used models of bereavement (Bennett & Soulsby, 2012).

Most grief theories provide a rather one-dimensional view of bereavement and grief. They do not sufficiently explain what predicts the course of grief or why some individuals remain significantly incapacitated by their grief, while others recover without any psychological intervention (Zisook & Shear, 2009). In the DPM grief is seen as a process which involves using coping strategies categorized as loss-oriented or restoration-oriented coping. A loss-oriented coping process focuses on coping with the grief itself by processing the loss experience (Ross, Kolves, Kunde et al., 2018). On the other hand, restoration-oriented coping involves restructuring one's life without the bereaved (Ross et al., 2018). The oscillation between loss-oriented and restoration-oriented coping contributes to healthy adaptation to bereavement.

In contrast, stagnation in loss-oriented coping could contribute to complicated grief (Stroebe & Schut, 2001). The DPM suggests that coping with grief is mediated by a variety of factors. These factors include individual factors such as the personality traits of the bereaved and the developmental level of the bereaved, cultural background and spiritual beliefs, as well as the presence of stressors. Other factors include the relationship between the deceased and the bereaved, the nature of the death, cultural background and spiritual beliefs, previous and concurrent stressors in a person's life, and quality social resources available to the bereaved person. Therefore, utilization of the DPM also allows the examination of other bereavement and related health and social outcomes, including treatment need, and service use.

The Integrative Risk Factor Framework (Stroebe et al., 2006), an expansion of the DPM, provides a more in-depth analysis of how individuals cope with bereavement. The Integrative Risk Factor Framework incorporates elements of the cognitive stress model (Lazarus and Folkman, 1981), which posits that through a process of cognitive appraisal, individuals experience a given situation as stressful when their coping resources exceed the demands for the

situation, and when the situation is personally meaningful. The Integrative Risk Factor Framework identifies **bereavement related risk factors**, which include the traumatic or "sudden, unprepared, and untimely" loss of a close loved one (Stroebe et al., 2006, p 2444). These bereavement related risk factors interact with **inter/-non personal risk factors** including social support and intervention programs, **intrapersonal risk factors** including SES, gender, predisposing vulnerabilities, and **appraisal and coping** mechanisms to determine bereavement and health-related outcomes.

Utilization of the Integrative Risk Factor Framework also allows the examination of other bereavement and related health and social outcomes, including treatment needs and service use. The current study is positioned within the Integrative Risk Factor framework. While most grieving individuals can cope with loss, some individuals remain in a "chronic state of mourning" (Schnider, Elhai, & Gray, 2007, pp. 344–345) which can significantly impact several areas of functioning (Balk., 2001). Therefore, an examination of sudden death bereavement through the Integrative Risk Factor Framework will examine risk factors, protective factors, and bereavement-related factors that contribute to bereavement outcomes.

### **Typology of Grief and Bereavement**

**Complicated grief versus Uncomplicated grief.** For a vast majority of people, a typical course of grief lasts up to six months and requires no treatment (Stroebe et al., 2007a). Unfortunately, for approximately 10-12 % of people who have lost a significant person through death (Stroebe et al., 2007), the grief they experience does not resolve naturally and instead persists indefinitely, contributing to varying degrees of incapacitation termed complicated grief (CG) (Shear et al., 2007). Complicated Grief occurs especially if the death was sudden, traumatic and unexpected (Shear et al., 2007). Although many people adapt to the loss and continue with

their lives, for some people recovery from bereavement is significantly more complicated and is associated with several complex emotional, mental, and physical symptoms. This is called Complicated Grief (CG) and was more recently termed Pervasive Complex Bereavement Disorder (PCBD). PCBD is listed in Appendix 3 of the DSM-5 (American Psychiatric Association, 2013). One of the critical features of PCBD is that of yearning or pining for the deceased (Parkes & Weiss, 1983). Individuals experience frequent anguish at being separated from the loved one and experience includes; intrusive thoughts about the relationship, intense feelings, emotional pain, and yearning for the lost person). PCBD also includes cognitive, emotional and behavioural symptoms such as symptoms reactive distress to the death or social/identity disruption (APA, 2013)

These symptoms must have persisted for six months or more after the onset of the separation distress and have to cause clinically significant distress or impairment in social, occupational or other important areas of functioning. Also, they cannot be better accounted for by other mental disorders, including Major Depressive Disorder, Generalized Anxiety Disorder, or Post Traumatic Stress Disorder. Historically, researchers have argued that complicated grief was mainly grief-triggered major depressive episodes or an anxiety-based disorder made worse by the grief (Kim & Jacobs, 1991; Young et al., 2012). However, grief symptoms only partially overlap with symptoms of depression (Boelen, Van Den Bout, & De Keijser, 2003) and other *DSM* categories. Moreover, grief symptoms are unique enough to warrant separate diagnosis and consideration (Prigerson et al., 2001).

In the DSM-5, the bereavement clause was removed from the diagnosis of Major Depressive Disorder. Under the new DSM diagnostic criteria, an individual can be diagnosed with depression even two weeks after the death of a loved one (although clinicians are not



compelled to do so). Therefore, one must be careful when distinguishing PBCD from MDD or PTSD, as CG is thought to have a different clinical picture (Lichtenthal, Cruess, & Prigerson, 2004). Depression is more pervasive, and rumination is focused on life and oneself, whereas PBCD rumination focuses on separation from the deceased (Boelen, 2006). PTSD is characterized by fear and anger reactions compared to PBCD, which is characterized, by loss or emptiness (Boelen, 2006).

The prevalence of complicated grief in the sudden death bereaved population is higher than in the general population (Fujisiwa et al., 2010) particularly for more violent deaths (Neria et al., 2004, Dyregov et al., 2003). The severity of PBCD is associated with the suddenness of the death (Fujisiwa et al., 2010; Goldsmith et al., 2008). When the death is violent and traumatic, it can affect the grieving process, as it makes the process of coming to terms with the loss more difficult and makes a more severe CG reaction more likely (Currier et al., 2006; Nakajima et al., 2012). In addition, when the death is due to an accident, homicide or suicide; there may be legal proceedings involved, and sometimes even unwanted media attention. These factors could increase distress and stress reactions; contributing to an increase in social isolation, depression, and anxiety (Herman et al., 2006; Nakajima et al., 2012). Therefore, the intense suffering of people experiencing the death of a loved one under these circumstances should be the focus of clinical intervention. However, clinicians have differing opinions about whether grief should be regarded generally as a condition requiring treatment (Shear et al., 2007).

Grief has differential effects on individuals, depending on stage of life, as well as relationship to the deceased (Bradbeer et al., 2003; Bolton et al., 2003). University students are a unique population in terms of bereavement outcomes (Balk, 1997; Balk, 2001; Balk et al., 2010), therefore we will be examining grief due to sudden-death bereavement in this population. More

detail on bereavement in university students is provided below (see the section on University Students and Bereavement).

### **Risk and Protective Factors according to the Integrative Risk Factor Model**

**Cause and circumstances surrounding the death.** General bereavement is associated with a variety of adverse mental and physical health outcomes. Bereavement is also associated with physical morbidity (Stroebe et al., 2007a), increased mortality, and risk of suicide (Boyle, Feng, & Raab, 2011; Erlangsen, Jeune, Bille-Brahe, & Vaupel, 2004; G. Li, 1995; Manor & Eisenbach, 2003; Martikainen & Valkonen, 1996; Mendes de Leon, Kasl, & Jacobs, 1993). Many people experience the loss of a loved one at some point in their lives. However, when compared to other causes of death, the effects of traumatic loss are more complicated, and the process is more prolonged (Miyabayashi & Yasuda, 2007).

A violent death, (e.g. by accident, homicide or suicide) leaves the survivors at increased risk for PTSD and CG (Hibberd, Elwood, & Galovski, 2010). The psychological and physical outcomes of non-traumatic bereavement and non-bereaved trauma could have different outcomes, but more research in this area needs to be done (Neria & Litz, 2004). Therefore, it can survivors of a sudden-death or traumatic bereavement not only have to cope with the grieving process, but they may also have to deal with the experience of losing a loved one in a potentially horrific manner. This traumatic loss could contribute to developing PTSD and other negative outcomes (Prigerson et al. 1997). When suddenness of death is taken into account, bereavement by accidental deaths and suicides are associated with the highest mortality risk in the bereaved (Martikainen & Valkonen, 1996; Rostila, Saarela, & Kawachi, 2012). Although sudden death bereavement differs from general bereavement in terms of severity and outcome, it is a vastly understudied field (Brent, Perper, Moritz, Baugher, et al., 1993; Brent et al., 2012; Harrison and

Harrington 2001; Neria & Litz 2004). Compared to general bereavement, sudden-death bereavement is also associated with more damaging health outcomes including higher mortality risk (Bolton et al., 2013; Kristensen, Weisæth, & Heir, 2012; Lindqvist et al., 2008; Séguin, Lesage, & Kiely, 1995; Sveen & Walby, 2008). Therefore, sudden-death bereavement is an area of clinical concern.

**Relationship with the deceased.** The nature, as well as quality, of the pre-death relationship with the deceased, may affect the outcomes of bereavement. The untimely death of a child or spouse is a particularly devastating loss. Some studies show that close kinship (death of immediate family member versus distant relative) was the most powerful predictor of intense grief (Laurie and Neimeyer 2008; Neimeyer, Prigerson, and Davies 2002). After a sudden loss, spouses and parents experienced higher levels of distress compared to adult children and siblings (Neimeyer & Burke 2012). Fourteen months post-grief, parents exhibited higher levels of CG than did spouses (Bonanno et al., 2005). Other studies point out that, regardless of the nature of the defined relationship, it is the closeness to the deceased that is correlated with outcomes (Holland, 2011; Strobe, 2007; Servaty-Seib 2006). Disenfranchised grief which occurs when a loss cannot be "openly acknowledged, socially sanctioned, or publicly mourned" (Doka, 1989, p4), could make bereavement more difficult. For example, a co-worker or a close friend may not be recognized as grievers (Leichtentritt, Leichtentritt, Barzilai, & Pedatsur-Sukenik, 2013; Meagher & Balk, 2013).

**Parents.** Losing one's child, suddenly and traumatically, is out of synchrony with the natural order of things, therefore placing a parent at risk for intense psychological suffering (Keesee, Currier, & Neimeyer, 2008). Parents often experience incident psychopathology after the sudden loss of a child, whether minor or adult (Bolton et al., 2014; Dyregrov, Nordanger, &

Dyregrov, 2003; Lehman, Lang, Wortman, & Sorenson, 1989; Murphy, Johnson, Chung, & Beaton, 2003; Séguin et al., 1995; Sveen & Walby, 2008). Studies show high rates of mental disorders in sudden death bereaved parents relative to the population; including incident depression (15.9%-62%), anxiety (21.9-23.0%), increased risk for PTSD (34% -51%), complicated grief (43% to 78%), and other psychological sequelae (Bolton et al. 2014; Lehman, Wortman, and Williams 1987; Lehman et al., 1989; Murphy, Johnson, Wu, et al. 2003; Séguin, Lesage, and Kiely 1995; Sporeen, Henderick, and Jannes 2000). These mental health symptoms can persist several years after death (Bolton et al. 2014).

Seguin and colleagues (1995) conducted interviews with 60 parents who lost children 18-35 years old either in motor vehicle accidents (MVAs) or to suicide. They used well-validated measures, including the Inventory of Complicated Grief (ICG) and the General Health Questionnaire (GHQ-28). Parents of suicide victims were initially more depressed than parents who lost their children in an MVA; however, at the second follow-up nine months later, these significant differences disappeared. Parents that reported poor support from administration, hospital officials, and law enforcement at the time of the loss suffered worse outcomes. Regardless of the cause of the loss, mothers often reported worse outcomes than fathers.

Bolton and colleagues (2014) used population health data to compare non-bereaved parents, motor-vehicle accident bereaved parents, and, suicide-bereaved parents on a) mental health outcomes (depression, anxiety, substance use disorders, dementia and suicide attempts), b) physical health outcomes (cardiovascular disease, cancer, COPD, hypertension and diabetes), c) demographic factors and d) treatment use. Compared to the non-bereaved parents, bereaved parents were significantly more likely to have a mental disorder, including depression and anxiety, even up to two years post-loss. Furthermore, the loss appeared to contribute to further

isolation, as the loss of a child can lead to difficulties in family functioning. Marital breakup rates were higher in accident bereaved and suicide bereaved parents compared to controls (Bolton et al., 2013). This study also found higher levels of service use in bereaved individuals in the months to years after the child's death, indicating the significance of distress these parents. However, due to the epidemiological nature of this study, it is difficult to say whether these individuals were aided by their treatment-seeking efforts. Other longitudinal studies followed parents for five years after the violent death of their child (Murphy et al., 2003). The cause of the child's death (suicide), parent's sex (mothers), more reactive coping skills, mental distress, and lack of early bereavement intervention predicted the development of PTSD which sometimes persisted up to five years after the death.

Parents are more likely to experience complicated grief symptoms if their child died in a traumatic manner (Meert et al., 2001; Li et al., 2003). Bereaved parents also reported long-standing intense guilt and rumination surrounding the circumstances of the death, which persisted even up to several years after the death (Meert et al., 2001; Li et al., 2003). Therefore, it is not surprising that there are higher rates of mental disorders in bereaved parents than in non-bereaved parents (Bolton et al., 2014). There also appears to be small differences in the outcomes for parents bereaved by suicide versus parents bereaved by motor vehicle accidents (Bolton et al., 2013). The findings suggest that, regardless of the cause of death; the suddenness of death leads to negative physical and mental health outcomes in parents, mediated by such factors as coping styles, social support, gender of the parent, and attachment to the child.

*Spouses.* The loss of a spouse appears to be especially complicated by the presence of children in the relationship, as the way the spouse handles the bereavement can also affect the grief processes of children. There may be gender-related differences in spousal bereavement,

although both males and females expressed traumatic grief, depression, and anxiety; however, these symptoms were more pronounced in males (Chen et al., 1999). The loss of a partner seems to increase suicide risk, especially in older men (80 years and older). The suicide risk appears to be mediated by previous psychiatric history, and history of substance use and abuse (Duberstein, Conwell, & Cox, 1998).

Physical health consequences include increased physical morbidity (Bradbeer, Helme, Yong, Kendig, & Gibson, 2003; Lannen, Wolfe, Prigerson, Onelov, & Kreicbergs, 2008). Furthermore, spouses with unresolved grief report worse physical health, increased physician visits, as well as greater amounts of sick leave. These mood disturbances can also aggravate pain in older people (Bradbeer et al., 2003). Spouses who experienced high levels of traumatic grief were also more likely to experience a severe physical health event such as cancer or a heart attack in 25 months (Chen et al., 1999).

Most research on sudden loss in romantic relationships focuses on the death of spouses rather than the death of romantic/dating partners. However, it is important to recognize that their grief experience over sudden loss may be more difficult because such partners may not be recognized as legitimate mourners, which could contribute to disenfranchised grief (Leichtentritt et al., 2013).

**Children.** The death of a parent has been rated by experts across cultures as the most stressful experience a child can experience, as it profoundly threatens a child's sense of security (Harrison & Harrington, 2001; Yamamoto et al., 1996). A population-based, longitudinal study of the impact of sudden death showed that 30% of children who experienced the loss of a parent developed CG symptoms (Melhem et al., 2011). These CG symptoms were associated with greater functional impairment beyond that accounted for by other psychopathology. There was

also an increased incidence and earlier onset of depression in the youth with prolonged grief reactions. In one study, offspring aged 7-25 years were followed 21 months after the death of a parent by suicide, accident, or sudden natural deaths (Brent et al. 2009). Such traumatic, sudden deaths were correlated with higher rates of incident depression, and alcohol and substance abuse relative to non-bereaved controls or those bereaved by more natural causes. In another large-scale, Swedish epidemiological study (n= 44,397, ages: 7-25), children (<17 years) whose parents died by suicide had a threefold increased suicide risk compared to their non-bereaved and other-bereaved counterparts (Kendler et al., 2002; Wilcox et al., 2010). Offspring of suicide decedents had a high risk of hospitalization for suicide attempts, depressive disorders, psychotic disorders, and personality disorders. Even accidental parental death contributed to higher rates of depression, bipolar disorders, alcohol and substance abuse, and personality disorders. The death of a parent, regardless of the type of death, also increased the risk of being convicted of violent criminal behaviour (Brent et al. 2009; Wilcox et al. 2010). Overall, there is a greatly increased risk of adverse outcomes in bereaved offspring (Brent et al., 1993; Cox et al. 2012a, 2012b; Harrison and Harrington 2001; Pfeffer et al. 2000; Wilcox et al. 2010).

The above adverse outcomes are not only restricted to the loss of a parent. The loss of siblings is an uncommon occurrence which may affect all future relationships (Dickens, 2013). Sibling bereavement is associated with negative outcomes, particularly because at the time of death, parents themselves are coping with the loss of the child. Therefore, siblings are often unintentionally ignored (Dickens, 2013) and may experience the loss of a parent in addition to a sibling. The death of the sibling is correlated with increased rates of depression and anxiety, as well as complicated grief; especially when the sibling died by violent means (Dillen, Fontaine, & Verhofstadt-Denève, 2009). Other studies have echoed these findings (Golden & Dalgleish,

2012).

***Other relationships.*** Friends and co-workers who have experienced the suicide of a loved one are at risk for major depression and CG, although less so than parents, children, and spouses (Young et al., 2012). Among individuals who have experienced the loss of a close friend, life satisfaction declines and continues to persist up to four years post-loss. Such loss also impacts social functioning and mental health outcomes (Liu, Forbat & Anderson, 2019). It is commonly believed that grief follows a hierarchy, whereby spouses and family members grieve more and are more affected by the loss than friends. However, this does not take into account the quality of the relationship with the deceased, which can lead to disenfranchised grief (Robson & Tony, 2013). In summary, there is insufficient information on sudden death bereavement as a whole and the effect of sudden death bereavement on non-kin.

**Coping Style.** Bereavement is a particularly stressful event, disrupting multiple areas of an individual's life and coping with a loss is challenging across multiple domains (Aslanzadeh, 2017). A bereaved individual may have to come to terms with the loss and also cope with other secondary issues, e.g., financial instability, effects on other family members, and different relationship dynamics (Aslanzadeh, 2017). A person's coping style in the event of a loss could help cushion the person against the loss or could predict negative reactions. According to the Integrative Risk Factor Framework (Stroebe et al., 2006), coping is a significant factor that influences grief outcomes. Individuals cope with stressors such as bereavement by deploying cognitive and behavioural resources to manage stress (Lazarus & Folkman, 1986; MacNeill, DiTommaso & Brunelle, 2016). While the loss of a loved one is always a distressing event, it is the individual's appraisal of the loss, as well as their own perceived resources to deal with the loss, that are thought to influence the bereavement experience (Lazarus, 1993; Schneider et al.,



2007; Wortman & Boerner, 2011). Coping with a stressor such as grief, can involve a) problem-focused coping (e.g. developing financial goals after the loss of a partner who provided financial support) or b) emotion-focused coping. Emotion-focused coping includes both active emotion coping (e.g. seeking emotional support) and avoidant-based coping (e.g., using substances to numb feelings and therefore cope with loss) (Anderson et al., 2005; Carver, Scheier, & Weintraub, 1989; Meert, Thurston, & Thomas, 2001; Schnider et al., 2007; Stroebe & Schut, 2001).

The transactional theory of stress states that when faced with a significant stressor, individuals evaluate the significance of the event and determine whether they have the resources to cope (Lazarus & Folkman, 1984). An individual engages in adaptive coping when they believe they have the resources to cope with the stressor (Aslanzadeh, 2017; Lazarus & Folkman, 1984). "Coping involves cognitive and behavioural measures designed to master, tolerate, or reduce external and internal demands and conflicts" (Yi, Smith and Vitaliano. 2005, p. 258). Therefore, these coping strategies can have an effect not only on the current stressor but on the health and well-being of the individual in the long-term (Garcia, 2010).

The 5-factor revised COPE model expands on the above framework (Zuckerman & Gagne., 2003). Adaptive coping responses in this model include **self-help** or prioritizing emotional well-being, **approach** which includes problem-solving strategies, and **accommodation or optimism**, or positive reframing of stressors. Less adaptive coping strategies (when used in excess) include **avoidance** or orienting oneself away from the problem or engaging in problematic behaviour excessively as a distraction, and **self-punishment**, which involves engaging in excessive rumination.

The Dual Process Model (Stroebe & Schut, 1999) suggests that alternating between

coping strategies based on the needs of the situation determines better bereavement outcomes. According to Nolan-Hoeksma (1994), bereavement is an informative paradigm within which to study emotion-focused coping because the loss of a loved one is an uncontrollable event. In contrast, in other forms of loss (e.g. loss of a relationship or a job), poor coping strategies may have contributed to the loss. Additionally, the loss creates other stressors (e.g. financial or logistic) which must be coped with (Stroebe et al., 2007).

A study of 123 university students who had lost an immediate family member, close friend, or romantic partner found that avoidant coping styles were more correlated with complicated grief than other coping styles. Therefore, a person's coping style can play a significant role in moderating the effects of traumatic loss (Meert et al., 2001; Stroebe & Schut, 2010). Other personality factors that predicted better outcomes were higher self-esteem (Ong, Bergeman, & Bisconti, 2005), higher levels of optimism and positive emotion, and perceived control over one's daily activities (Ong, Bergeman, & Bisconti, 2004; Ong et al., 2005). Therefore, these coping strategies can have an effect not only on the current stressor but on the health and well-being of the individual in the long-term (Garcia, 2010).

**Treatment needs and health service use.** Although several studies show that the trajectory of bereavement is much worse in sudden-death bereavement than bereavement due to other causes (Bolton et al., 2013; Dyregrov et al., 2003), there have been very few studies examining the perceived need for care in this population. Many of the studies conducted on the perceived needs of the sudden-death bereaved are limited to the suicide-bereaved population. Unsurprisingly, sudden-death bereavement is followed by increased rates of outpatient health service use (Bolton et al., 2013; Kuramoto et al., 2010), including mental health professionals as well as general health practitioners (Dyregrov, 2002; McMenamy et al., 2008). Different types of

help can address different types of need. However, there is a noteworthy gap between the needs of the bereaved and how these needs are met (Dyregrov, 2011). Physicians report that they have few resources and training to provide care for the bereaved, although they are often the first resource for this population (Saunderson & Ridsdale, 1999).

The Andersen behaviour model (Andersen, 1995) outlines what predicts help-seeking behaviour by distressed individuals. It includes predisposing (demographic factors and social factors), enabling (financial factors and care availability), and need factors (perceived need for health services versus professionally evaluated need) (Andersen, 1995; Babitsch, Gohl, & Lengerke, 2012). The model posits that if individuals perceive a need for care, have the necessary resources to access care, and their attitudes align with receiving care; then they are more likely to seek help (Babitsch et al., 2012). An examination of university students and their perceived needs for care after sudden death bereavement will, therefore, provide insight into the unique needs of this population.

Even though it is clear that sudden-death bereaved individuals need care and perceive a great need for help, the resources available do not meet their needs (Dyregrov, 2002, Dyregrov, 2011; McMenamy et al., 2008; Provini et al., 2000, Young, 2012). Furthermore, the functional impairment caused by bereavement includes higher levels of psychological distress and social isolation, which ultimately are barriers to seeking help (McMenamy et al., 2008). Some research suggests that support and help received after a bereavement that influences adjustment even when controlling for other factors (Séguin et al., 1995), suggesting the importance of interventions in place to mitigate the adverse outcomes after a traumatic loss.

When people do seek help, it is imperative that they are provided with effective resources. With regards to CG, there are some promising evidence-based interventions.

Complicated Grief Therapy (CGT) developed by Shear and colleagues (2005) is a combination of interpersonal therapy (IPT) and cognitive behaviour therapy (CBT). CGT involves many components; the IPT component focuses on helping the client re-establish relationships while the CBT element targets the intrusive memories and the pain surrounding the loss (Wetherell, 2012). CGT has been tested cross-culturally and with individuals reporting comorbid conditions and is effective in treating CG (Wetherell, 2012). However, CG is not a commonly diagnosed condition, and consequently, few people seek professional support for CG, despite the availability of evidence-based interventions (Wetherell, 2012).

### **University Students and Bereavement**

University students are an at-risk segment of the population for mental disorders, as many first-onset mental disorders occur during the university years, especially mood, anxiety and substance use disorders (Kessler et al., 2007). Approximately one-third of the university student population endorsed symptoms of depressive, anxiety, and alcohol and substance use disorders in a World Health Organization Mental Health survey across eight countries (USA, Australia, Belgium, Germany, Mexico, Northern Ireland, South Africa, and Spain). This high prevalence rate speaks to the importance of researching the mental health of university students (Auerbach et al., 2018).

Until recently, few studies examined mental health in a university population (Auerbach et al., 2018) and fewer studies have examined sudden death bereavement in the university population. Bereavement is especially common on university campuses, with some studies estimating that approximately 22-30% of university students have lost a close family member or a friend within the last year (Balk, Walker, & Baker, 2010; Balk, 1997; Hardison et al., 2005; Wrenn, 1991). These prevalence statistics are based on the United States population. The 2019

Canadian Reference Group National College Health Assessment (American College Health Association, 2018) also reported that the death of a loved one had academically impacted approximately 9% of all university students across Canada. Bereavement is common in university campuses and is described as a "silent epidemic" having significant effects on social and academic development, but little attention is paid to it (Neimeyer et al. 2008).

**Emerging adulthood.** Emerging adulthood is a developmental period between 18 and 30 years old when individuals develop their independence from their family of origin and cultivate their identity (Arnett, 2000). Family Life Course Theory is an interdisciplinary theory that examines an individual and family development within cultural and societal contexts (Elder, 1985). According to this theory, a negative experience during this time can contribute to developmental challenges (Porter & Claridge, 2019). One such stressor is an "off-time" where a life-event does not follow expected timelines (Settersten & Hagestad, 1996). The unexpected death of a parent or sibling could be an off-time stressor (Porter & Claridge, 2019), and therefore increase risk of mental disorder in an already vulnerable population (Mechling, 2015; Porter & Clardige, 2019). According to Porter & Claridge (2019), emerging adults usually have not previously experienced the loss of an immediate family member. Experiencing this loss could change their perspectives on the world, from a just world to a world of adversity (Lench & Chang, 2007), thus putting them at risk for maladaptive coping (Porter & Claridge, 2019). Some research suggests that loss during emerging adulthood is associated with both depression and CG (Schwartz et al., 2018).

Although research on sudden death bereavement in university students is sparse, research on general bereavement in the student population identifies common effects of bereavement. These include physical, cognitive, behavioural, interpersonal, and emotional aspects of grief

outlined in Balk's (2011) holistic model (Varga, 2016). These common responses to grief are summarised below.

**Emotional.** Emotions associated with grief are quite common and vary from person to person. These emotions can include shock, anger, fear, sadness, helplessness, irritability, numbness and depression throughout the grieving process (Lagrand, 1981). Psychologically speaking, the individual may have difficulty accepting the loss, and may experience increased anxiety. In the short term, the person may experience guilt and remorse, especially if the death was preventable or if they felt somehow responsible for the death (Kolves & De Leo, 2014). In the long term, the person may also continue to revisit the memories surrounding the death, which may intrude on the mind in the form of recurring images (Kolves & De Leo, 2014).

**Physical.** There is clinical evidence that neuroendocrine activation in response to bereavement contributes to an increase in cortisol levels. These increased cortisol levels are thought to contribute to altered sleep, a depressed immune system (Goodkin et al., 2001) as well as changes in heart rate and blood pressure (Buckley, Sunari, Marshall et al., 2012). These changes could contribute to fatigue and restlessness, as well as sleep disorders (Monk, Germain, & Reynolds, 2008). Physical effects of bereavement include insomnia, (Hardison et al., 2005), headaches, exhaustion, digestive disturbances and weakness (Lagrand, 1981). Bereaved compared to non-bereaved students, also reported higher levels of eating disorders (Beam, Servaty-Seib and Matthews, 2004).

**Cognitive features.** Grief is a significant stressor, and it is common for grieving individuals to experience difficulties with memory, attention, concentration, and decision-making (Balk, 2001; Laverty & Schultz, 2012). These cognitive responses may be short-term or long-term (Kolves & De Leo., 2014).

**Behavioural features.** These include social isolation, changes in sexual drive, increased irritability, as well as dreams of the deceased (Lavery & Schultz, 2012). The person may also withdraw from their social networks, as well as their academic and work responsibilities, which could increase their social isolation (Kolves & De Leo., 2014).

Bereaved students' grades drop significantly in the first semester after bereavement therefore, bereaved students also have difficulties maintaining academic functioning (Servaty-Seib & Hamilton, 2006). In addition to these negative effects, approximately 10-15% of bereaved students could develop CG which contributes to an impairment in functioning and a loss of purpose (Neimeyer et al. 2008; Zhang, El-Jawahri, & Prigerson 2006). University students are generally exposed to high levels of stress (Gall, Evans, & Bellerose, 2000). Therefore, dealing with a loss, especially of an attachment figure, can significantly interfere with psychosocial development.

### **Aims of the Dissertation**

There are several negative mental and physical health outcomes of sudden death bereavement that are outlined in the literature; including higher rates of mental health conditions and poor physical outcomes. However, there is a distinct lack of information on risk, protective factors, and treatment needs in bereaved university students. Many studies on sudden-death bereavement are focused on specific familial relationships including parents, offspring, siblings and spouses; however, research shows that mental health and physical health outcomes are dependent on closeness of the relationship with the deceased (Neimeyer et al., 2008). More research on sudden death bereavement is needed in the university student population, due to the high prevalence of accident and suicide in this population. Furthermore, there is a lack of research examining the perceived need for care in the university student population. The

perceived need for care is an important factor in determining treatment-seeking behaviour (Sareen, Cox, Afifi, Clara, & Yu, 2005). University students, even when faced with significant mental health concerns, do not generally seek help; therefore, this is an important research area (Eisenberg et al., 2007).

Most research on bereavement in the university population is based on general bereavement, and it has been established that individuals bereaved by sudden-death face a different trajectory than individuals bereaved under different circumstances. The current research has addressed these limitations in the literature by examining sudden death bereavement in university students and comparing them to a non-sudden death bereaved sample on factors such as anxiety, depression, PTSD, CG, and academic outcomes. Using the Integrative Risk Factor framework (Stroebe et al., 2006) as a guide, these factors were examined in conjunction with factors such as treatment use and coping strategies. We also examined treatment-seeking behaviour in these university students, including perceived need as well as barriers to accessing care.

Specifically, the aims of this dissertation were:

- 1) To compare sudden-death bereaved and non-sudden bereaved university students across a range of mental health outcomes. We hypothesized that sudden-death bereaved students would have poorer mental health outcomes compared to non-sudden bereaved students.
- 2) To examine coping behaviour in the sudden-death bereaved population and how these specific strategies are associated with mental health outcomes. Based on the Integrative Risk Factor Framework, we hypothesized that among sudden death bereaved students, maladaptive coping strategies would be associated with poorer mental health outcomes.



- 3) To examine the perceived need for care and help-seeking behaviour, as well as barriers to accessing care. Using the Andersen Behaviour Model, we hypothesized that individuals who perceived a need for care would be more likely to seek care, and those individuals who did seek care would have better mental health outcomes.

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CHAPTER TWO

STUDY ONE

Prevalence and Correlates of Sudden Death Bereavement in University Students

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### Abstract

**Background:** Bereavement among university students is more frequent than previously thought, and bereavement experiences during the post-secondary period could have significant impacts on multiple areas of development. Sudden death bereavement, where the death is unexpected and/or traumatic, is associated with several negative sequelae over and above loss due to an expected death.

**Objectives:** To determine the unique contributions of sudden death bereavement to the mental health of university students compared to non-sudden death bereaved university students.

**Methods:** We surveyed 1047 bereaved university students (response rate 92%) and compared the non-sudden death bereaved university student population to the sudden death bereaved university population on outcomes including mental health conditions, and complicated grief using logistic regressions.

**Results:** 62% of the sample reported sudden death bereavement. Sociodemographic factors did not account for differences between the sudden death and non-sudden death bereaved group. There were no differences on measures of PTSD, generalized anxiety disorder, depression, suicidal ideation, and at-risk drinking behaviour across types of bereavement. However, sudden death bereavement compared to general bereavement was associated with increased odds of complicated grief even when adjusted for sociodemographic and bereavement related factors such as time since death, relationship to the deceased, and closeness to the deceased. (Adjusted Odds Ratio = 2.06, 95% CI = 1.35-3.15,  $p < 0.001$ ).

**Conclusions:** Sudden death bereavement in university students is associated with an elevated risk of complicated grief. These findings confirm previous research and provide more insight

into the unique needs of university student coping with sudden loss, and thus provide the foundation of subsequent interventional studies in this group of at-risk bereaved student

### **Introduction**

In Canada, approximately 256,000 people die of various causes each year (Statistics Canada, 2019). A significant proportion of these are deaths due to sudden natural (e.g. strokes, heart attacks) and sudden unnatural causes (e.g. suicides, homicides, accidents). An unexpected natural death includes death which occurs within twenty-four hours of the first onset of symptoms, often caused by cardiac events, neurological causes, and pulmonary events (Gurger, Turkoglu, Atescelik et al., 2014). Sudden death also refers to a "death that could not have been predicted at the time which occurred suddenly or within a matter of days" (Pitman, Rantell, Moran et al., 2017, p. 2). Unexpected deaths also include traumatic, unexpected deaths such as deaths due to accidents and other unintentional injuries, as well as suicides and homicides (Pitman et al., 2017). Altogether, approximately 31% of deaths in Canada are sudden and unexpected (Statistics Canada, 2019), and the sudden death of a loved one is reportedly one of the most frequent traumatic experiences (Keyes, Pratt, Galea et al., 2014). Sudden-death bereavement is associated with poor mental health and physical health outcomes, as well as social and emotional consequences (Bolton et al., 2013; Kristensen, Weisæth, & Heir, 2012; Lindqvist et al., 2008; Séguin, Lesage, & Kiely, 1995; Sveen & Walby, 2008) possibly due to the unexpected and often traumatic nature of the death, thus highlighting the need for further research in this population.

University students are often recently bereaved, with approximately 22-30% of university students reportedly losing a close family member or a friend within the last year (Balk, Walker, & Baker, 2010; Balk, 1997; Hardison et al., 2005; Wrenn, 1991). With almost 1.7 million Canadians enrolled as students in campuses across the country (Statistics Canada, 2018), a large number of Canadian students may be impacted by bereavement. Approximately 9 % of all

university students across Canada, reported being academically impacted by the death of a family member or friend (American College Health Association, 2019). Although bereavement has several academic, emotional, social, and developmental consequences, it is given little attention by the university administration and staff (Neimeyer et al., 2008).

Most university students are in a period of emerging adulthood, which is a period of transition from adolescents to independent adults (Arnett, 2000). During this period of role transition, university students may be facing several concurrent stressors, including being away from support systems, academic pressures, and managing multiple role demands (Mash and Fullerton, 2013). Accordingly, experiencing a loss during this stage can disrupt normative development and well-being (Mash et al., 2013; Balk, et al., 2010). A bereavement could also lead to underperforming academically and therefore academic disruption (Balk, 2010), particularly in the semester of the loss (Servaty-Seib & Hamilton, 2006). Other outcomes of bereavement include financial difficulties or the loss of someone who provided social support (Balk et al., 2010). Peers may shun the griever due to discomfort with grief, feeling underequipped to provide support and may dismiss the intensity and duration of the grief (Balk et al., 2010) thus contributing to an increased sense of isolation.

Despite the prevalence of bereavement in university students, most university students do not seek help for bereavement related distress, rather for associated symptomatology such as difficulty with concentration and insomnia (Hardison et al., 2005). The sadness, insomnia, and decreased appetite associated with bereavement could persist into depressive symptoms or anxiety symptoms and potentially co-occur with Post Traumatic Stress Disorder (PTSD) (Francis et al., 2015; Zisook & Kendler, 2007; Zisook & Shear, 2009; Zisook et al., 1998). Bereavement is also associated with physical morbidity (Stroebe et al., 2007) increased mortality risk, and risk



of suicide (Boyle et al., 2011; Erlangsen et al., 2004; Li, 1995; Manor & Eisenbach, 2003; Martikainen & Valkonen, 1996; Mendes de Leon et al., 1993). The suddenness of the death also contributes to more intense grief and a prolonged grief response (Bolton et al., 2013; Kristensen et al., 2012; Lindqvist et al., 2008; Miyabayashi & Yasuda, 2007; Séguin et al., 1995; Sveen & Walby, 2008). In the traditional aged-university population (18-25), accidents and suicides are among the leading causes of death (Statistics Canada, 2019), making it increasingly likely that students experience the sudden death of a friend or sibling. Taken together, these findings suggest that sudden death bereavement has the potential to affect the university student population negatively, and there is insufficient information on risk, protective factors, and treatment needs in this population. While the university student sample is likely not representative of the population in general, given the universality of bereavement, research into this population could provide additional insight or future directions of research pertaining to the population at large (Kukull & Ganguli, 2012).

#### **Aim of the Current Study and Limitations of Previous Research**

The purpose of this study was to examine the mental health outcomes of bereaved university students. There is a paucity of research on the bereavement experiences of university students, even though this can have an impact on mental health and academic outcomes (Balk et al., 2001). Within the bereaved student population, few studies have examined the unique effect of sudden death bereavement. Furthermore, many studies on sudden death bereavement are focused on specific familial relationships including parents, offspring, siblings, and spouses. However, research shows that mental health and physical health outcomes are dependent on the closeness of the relationship with the deceased rather than on a defined familial attachment (Neimeyer, 2018). The present study addressed these limitations by examining the unique effects

of sudden death bereavement on university students. Sudden death bereaved students were compared to non-sudden bereaved students on mental health and academic outcomes. We also considered the effects of relationship to the deceased as well as sociodemographic factors. Specifically, we aimed to address what is the effect of sudden death bereavement over and above general bereavement on symptoms of depression, anxiety, complicated grief, PTSD symptoms, alcohol use, and suicide ideation. We hypothesized that sudden death bereaved students would have poorer scores across these measures than non-sudden death bereaved students even when adjusted for sociodemographic factors, relationship to the deceased, and closeness to the deceased. Second, we aimed to differentiate between individuals who experienced sudden death bereavement and developed adverse outcomes versus who experienced sudden death bereavement and did not develop adverse outcomes.

## **Methods**

### **Sample and Procedures**

This was a cross-sectional study using Qualtrics (Qualtrics, Provo, UT) a software for online surveys. The study was approved by the Psychology Research Ethics Board at the University of Manitoba. Bereaved students enrolled in Introduction to Psychology courses were recruited for this study. Participants were required to be at least 18 years of age and to have lost a family member, a significant other, or a friend through death during the previous three years. All participation was voluntary, and before starting the survey, all participants provided informed consent by providing an electronic signature on the online survey. Recruitment was conducted from March 2017 to November 2018. Psychology students were awarded course credit for participation in this survey. After participation, students were given a list of mental-health

resources both in the university and in the community. These resources were provided regardless of survey completion.

The survey itself consisted of approximately 75 questions, excluding screener questions (questions on eligibility criteria), and took approximately 90 minutes to complete. Demographic information was collected along with mental health information, specifically symptoms of anxiety, depression, PTSD, and alcohol use. Data about the death was also collected; including relationship to the deceased and subjective closeness to the deceased. Finally, information on coping style and social support was gathered. A full description of the questionnaires is listed below.

### **Questionnaires**

**The Patient Health Questionnaire (PHQ-9-item version).** The Patient Health Questionnaire (PHQ-9) is a concise and self-administered tool that screens for symptoms of depression (Spitzer, Kroenke, Williams, & Group, 1999). The PHQ-9 captures the frequency of symptoms over the past two weeks on a 0–3 Likert-type scale ('not at all' to 'nearly every day'). The total score ranges from 0 to 27. Scores under four are classified as the absence of clinically significant depression, scores of five through nine as mild depression, and scores of 10 and above as moderate to severe depression. However, when using depression as a dependent variable, scores under five were compared to scores over five (i.e., absence of clinically significant depressive symptoms versus presence of a clinically significant number of depressive symptoms) (Kroenke, Spitzer, and Williams, 2001). Once a cutoff of >10 is reached, the PHQ-9 has a reported sensitivity of 88% and a specificity of 88% (Kroenke, Spitzer, and Williams 2001). Its reliability is very good with studies reporting Cronbach's alphas between 0.86 to 0.89 (Cannon et al., 2007; Diez-Quevedo et al., 2001; Kroenke & Spitzer, 2002).

The PHQ- 9 has a question on suicide ideation "thinking I would be better off dead or hurting myself in some way." This question has been identified as a robust predictor of the risk of future suicide attempt and risk of suicide (Rossom et al., 2017). We used this question to assess for suicide ideation. Individuals who answered "several days," "more than half the days," or "nearly every day" were classified as experiencing suicide ideation. The suicide ideation variable was used as a categorical variable.

**The Generalized Anxiety Disorder Assessment -7 (GAD-7).** The GAD-7 is used to identify symptoms of generalized anxiety disorder (Spitzer, Kroenke, Williams, & Löwe, 2006). The GAD-7 rates the frequency of symptoms over the past two weeks on a 0-3 Likert-type scale ('not at all' to 'nearly every day'). The total score ranges from 0 to 21. Cutoffs of 5, 10, and 15 represented mild, moderate, and severe anxiety, respectively (Spitzer, Kroenke, Williams, & Löwe, 2006). The GAD -7 has a sensitivity of 89% and a specificity of 82% (Spitzer et al., 2006). Its reliability ranges from 0.89 to 0.92 (Löwe et al., 2008; Spitzer et al., 2006). The GAD-7 has been validated in both clinical and non-clinical populations. For the purposes of this study, we classified scores under four as the absence of clinically significant anxiety symptoms. When using generalized anxiety disorder as a dependent variable, GAD-7 scores were used as a categorical variable due to the cutoff criteria. Scores under five were compared to scores over 5 (i.e., absence versus presence of clinically significant anxiety symptoms)

**The National Stressful Events Survey PTSD Short Scale (NSESS)** The National Stressful Events PTSD Short Scale (Kilpatrick et al., 2013) is a nine-item questionnaire. Each item is rated on a Likert Scale ranging from zero (*not at all*) to four (*extremely*). The scale measures the severity of posttraumatic symptoms over the previous seven days. The NSESS has high reliability with Cronbach's alpha of 0.901. Convergent and discriminant validity are also

both within acceptable limits when compared to more established, longer measures of PTSD (Le Beau et al., 2014). The average total score is calculated (total score divided by 9) and then rated on a five-point scale ranging from none (0), mild (1), moderate (2), severe (3), or extreme (4). For the purposes of our study, a categorical variable was created, separating scores of 0 to scores from 1-4 due to the cutoff criteria.

**The Alcohol Use Disorders Identification Test (AUDIT).** The AUDIT is a 10-item screening instrument that measures harmful alcohol use, abuse and dependence. The AUDIT assesses the amount and frequency of alcohol intake and problems related to alcohol consumption. Scores range from 0-40. A cutoff of 5 for females and a cutoff of 7 for males were suggested as scores indicating at-risk drinking in the university student population (Demartini & Carey, 2012). With a cutoff of five or six, the AUDIT has a sensitivity of 0.76 and specificity of 0.79 (de Meneses-Gaya et al., 2009). Its Cronbach's Alpha across studies ranged from 0.81 to 0.93 (de Meneses-Gaya et al., 2009). Given the different cutoffs for males and females for at-risk drinking behaviour, we used the scores on the AUDIT as a yes/no variable, with values over 5 for females associated with at-risk drinking, and values over seven for males categorized as at-risk drinking (DeMartini & Carey, 2012). When someone chose not to self-identify or identified as non-binary regarding sex, the lower cutoff was used.

**The Inventory of Complicated Grief (ICG).** The Inventory of Complicated Grief (ICG) is a well-established scale used to assess complicated grief (Prigerson et al. 1995). Respondents read a series of nineteen statements about their experiences (e.g. "I feel disbelief over what happened.") and emotions towards the deceased (e.g. "I feel bitter over this person's death."). They are then asked to report the frequency with which they experience each of these on a 5-point Likert scale ranging from "never", "rarely", "sometimes", "often" and "always." The ICG

corresponds to the diagnostic criteria for PBCD in the DSM-5 and has excellent psychometric properties. Scores range from 0 to 76. Respondents with scores higher than 25 are deemed to be experiencing complicated grief (Prigerson et al., 1995). Cronbach's alpha for the ICG is reported as 0.94. A study by Simon and colleagues (2011) revealed that the sensitivity of each item ranged from 88.8 to 97 and specificity of each of these items ranged from 90.7 to 100%. The ICG was used as a categorical variable due to the cutoff criteria.

**Comorbidity.** We also created a variable to determine whether sudden death bereavement was associated with comorbidity of presentations by combining data on the presence of complicated grief, at-risk drinking, PTSD symptoms, generalized anxiety and depression. If an individual presented with CG + any other condition (depression, anxiety, PTSD), it was considered as a comorbid presentation.

**Other information.** In addition to information collected via the questionnaires, we also collected sociodemographic information including gender (male, female, other), age (categories (18-25, 25 and above)) and ethnicity (White, Hispanic, Indian subcontinent, East and South-East Asian, Middle Eastern or Egyptian, Afro-Caribbean, African, African-American, or Black Canadian). Information on income (loans, bursaries, scholarships, work and parental support) was collected (<5000 to 60,000 and above). We also collected bereavement-specific information which included relationship to the deceased, cause of death, time since death (months), and closeness of relationship to the deceased (ranging from not close at all to very close). Information on relationship status was collected as well.

### **Statistical Analysis**

Sudden-death bereaved students were compared to general bereaved students (reference group) across various mental health outcomes. Data analysis was conducted using SPSS 25.0

(IBM, 2017). For sociodemographic variables, Pearson chi-squared tests were conducted to examine significant intergroup differences. To examine the association between sudden death bereavement and mental health outcomes; we conducted multivariate logistic regressions with the dichotomous mental health measures as outcome variables in the models. Control variables in the models included gender, age, ethnicity, relationship to the deceased, bereavement time(months), and relationship to the deceased (nuclear family member or significant other, friend, extended family member).

### Results

1047 University of Manitoba students were recruited for the study. Of these respondents, 83 registered for but did not complete the survey. Seventeen respondents did not identify the type of bereavement, an important classification variable, leaving us with a study sample of 964 bereaved students (92% response rate). Of participants, 62% respondents (599) indicated that they were sudden-death bereaved with the remaining 38% (365) endorsing general bereavement.

The mean age of the participants was 20.6 years (SD = 5.64). Males comprised 33.4 % of the sample, females approximately 65.6% of the sample, and 1.0% (10) of the sample selected 'other'. The median bereavement time was twenty-four months.

Figure 1 outlines the various causes of bereavement in the sample. One hundred thirty-four deaths were due to accidents (13.9%), 20 deaths were as a result of homicide (2.1%), 75 deaths due to suicide (7.8%), 223 deaths due to sudden illness (23.1%), 351 deaths were due to a terminal illness (36.4%), 74 deaths were due to natural causes (7.7%), 53 deaths were due to unknown causes (5.5%) and 34 deaths were classified under other (3.5%).

Table 1a outlines the demographic characteristic of the sample. Compared to males, females were more likely to report sudden bereavement (OR: 1.32; 95% CI: 1.01-1.74,  $p < .05$ ).

Compared to White students, Black students (OR: 3.30; 95% CI: 1.80-6.06,  $p < .001$ ) and students from the Indian subcontinent were also more likely to report sudden bereavement (OR: 2.50; 95% CI: 1.34-4.67,  $p < .001$ ). Table 1b outlines the bereavement characteristics of the sample. There were no significant differences in kinship relationship to the deceased or duration of bereavement between the sudden-bereaved and non-sudden bereavement sample.



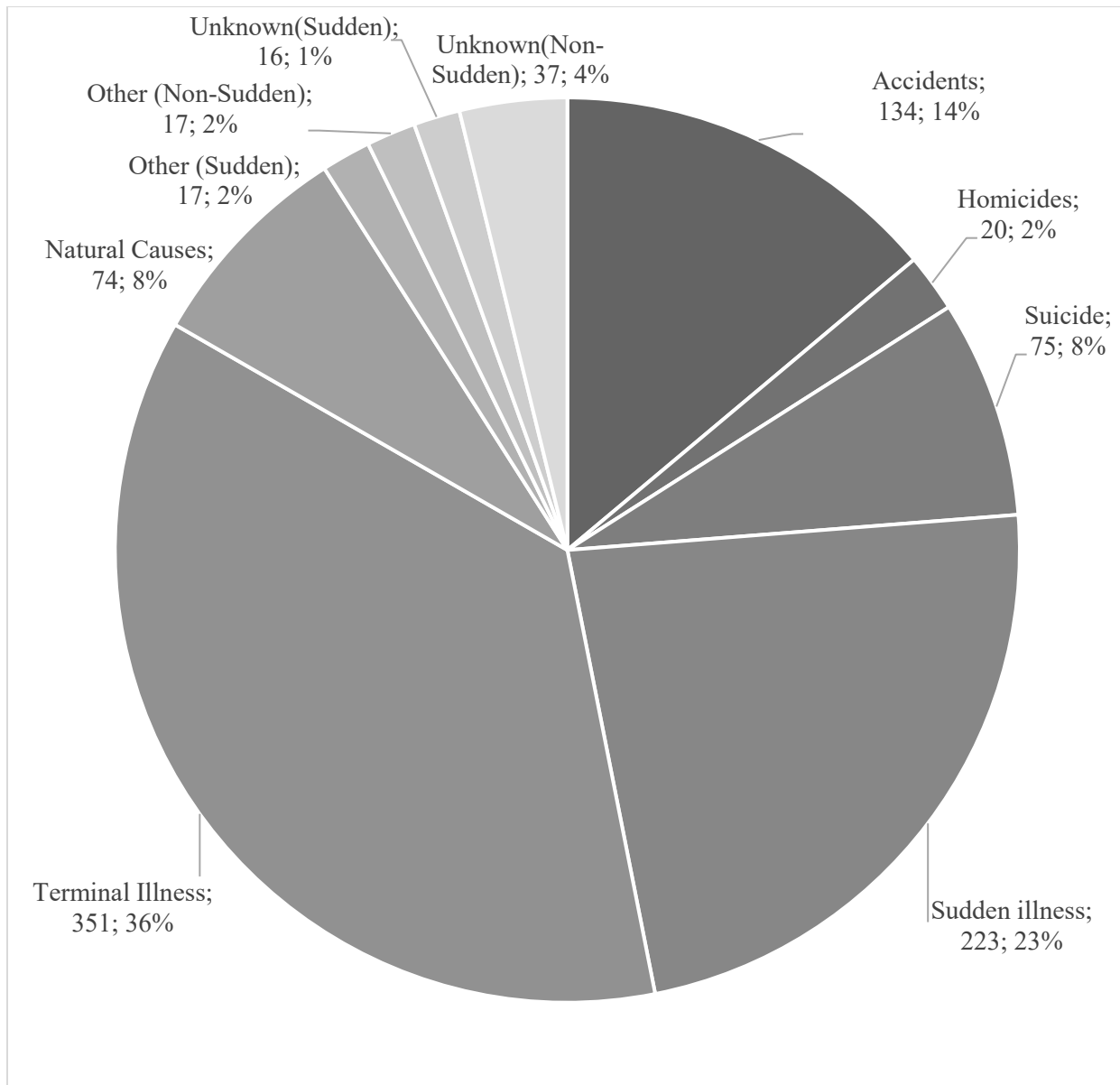


Figure 1. Causes of bereavement in the sample.

Table 1a

*Demographic characteristics of the sample*

	General Bereaved (N=365)		Sudden Bereaved (N=599)		Odds Ratio
	n	%	n	%	
<b>Age</b>					
18-23	320	87.7	520	87.4	0.96(0.66-1.45)
24 and above	45	12.3	75	12.6	1.00
<b>Gender</b>					
Male	136	37.3	186	31.1	1.00
Female	225	61.6	407	67.9	1.32(1.01-1.74) *
Other	4	1.1	6	1.0	1.10(0.30-3.96)
<b>Family Income</b>					
>9000	143	39.2	213	59.8	1.00
10,000-29999	73	20.0	131	21.9	1.14(0.84-1.56)
30000 and above	149	40.8	255	42.6	1.03(0.63-1.68)
<b>Ethnicity</b>					
White/European	202	55.3	271	45.2	1.00
Black	14	3.8	13	2.2	3.30(1.80-6.06) ***
East and South East Asian	78	21.4	110	18.4	1.05(0.75-1.48)
Indian Subcontinent	14	3.8	47	7.8	2.50(1.34 - 4.67) **
Hispanic/Latino	1	0.3	7	1.2	5.22(0.64-42.75)
Arab/Egyptian	8	2.2	13	2.2	1.21(0.49-2.98)
Other	28	7.7	49	8.2	1.30(0.79-2.15)
<b>Relationship</b>					
Single	205	56.2	350	58.4	1.00
In a relationship	151	41.4	233	38.9	0.90(0.69-1.18)
Prefer not to answer	9	2.5	16	2.7	1.04(0.45-2.40)

\* $p < .05$  \*\* $p < .001$  \*\*\* $p < .0001$

Table 1b

*Bereavement characteristics of the sample.*

	General Bereaved (N=365)		Sudden Bereaved (N=599)		Odds Ratio
	n	%	n	%	
<b>Duration of bereavement</b>					
1 year	88	33.2	177	66.8	1.41(0.96-2.06)
1 to 2 years	68	36.2	120	63.8	1.24(0.82-1.86)
2 to 3 years	103	41.5	145	58.5	0.99(0.68-1.44)
3 to 4 years	82	41.2	117	58.8	1.00
<b>Relationship with the deceased</b>					
Parent/ Sibling	16	35.6	29	64.4	1.00
Grandparents and Extended Family	305	47.1	343	52.9	0.62(0.33-1.16)
Friend	36	15.1	203	84.9	3.11(1.54-6.30)
Significant Other	4	22.2	13	76.5	1.79(0.50-6.64)
Child	0	0	1	100	NA

\* $p < .05$  \*\* $p < .001$  \*\*\* $p < .0001$

Table 1c

*Characteristics of bereavement among university students.*

	General Bereaved		Sudden Death Bereaved		Chi square (df)
	n	%	n	%	
<b>Depression</b>					
None to Mild	153	42.3	219	37.1	2.75(3)
Moderate	106	29.3	183	31	
Severe	60	16.6	107	18.1	
<b>Generalized Anxiety</b>					
None	178	49.8	253	42.2	3.93(3)
Mild	94	25.8	176	29.4	
Moderate	62	17.0	113	18.9	
Severe	31	8.5	57	9.5	
<b>PTSD</b>					
None to Mild	276	77.1	419	73.4	1.62(2)
Moderate	57	15.9	105	18.4	
Severe	25	7.0	47	8.2	
<b>Alcohol use</b>					
Not at-risk drinking	295	88.1	467	88.9	0.16(1)
At-risk drinking	40	11.9	58	11.1	
<b>Suicide Ideation</b>					
No	299	82.8	470	79.4	1.70(3)
Yes	62	17.2	122	20.6	

Table 3 outlines the association between mental disorders and sudden death bereavement. Even when adjusted for age, gender, income, ethnicity, time since death, relationship to the deceased, and quality of relationship with the deceased, sudden death bereavement contributed to increased risk of complicated grief (AOR 2 = 2.06; 95% CI=1.35-3.15,  $p < .001$ ). Sudden death bereavement was also associated with an increased likelihood of generalized anxiety disorder (UOR: 1.30; 95% CI: 1.00-1.70,  $p < .05$ ) and increased risk of comorbidities (UOR: 1.41; 95% CI: 1.04-1.90,  $p < .05$ ) in the unadjusted models. However, these associations were no longer evident in the adjusted models. Also, there were no associations between type of bereavement and depression, PTSD, alcohol consumption and suicide ideation.

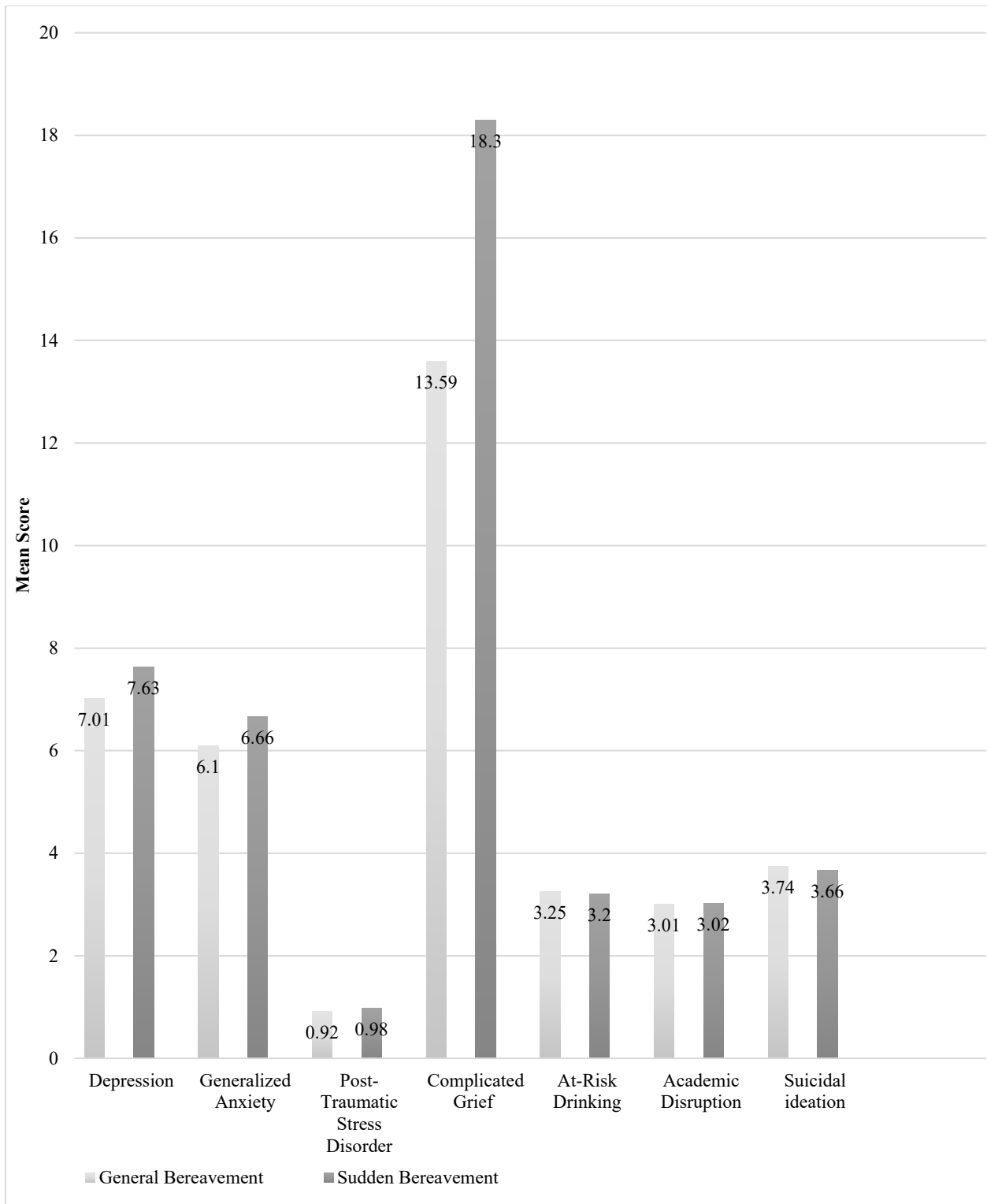


Figure 2. Mean scores across mental health inventories.

Table 2.

*Logistic regressions examining the effect of sudden death bereavement in university students.*

	Unadjusted Odds Ratio	Adjusted Odds Ratio <sup>1</sup>	Adjusted Odds Ratio <sup>2</sup>
Depression	1.18(0.88-1.57)	0.97(0.70-1.35)	1.08(0.79-1.47)
PTSD	1.22(0.90-1.66)	1.12(0.81-1.52)	1.17(0.84-1.64)
Generalized Anxiety Disorder	1.30(1.00-1.70) *	1.17(0.86-1.59)	1.29(0.96-1.74)
Complicated Grief	2.25 (1.57-3.21) ***	2.06(1.43-2.96) ***	2.06(1.35-3.15) **
At-Risk Drinking	0.92(0.60-1.41)	1.02(0.66-1.58)	0.86(0.46-1.59)
Suicidal Thoughts	1.25(0.89-1.76)	1.18(0.84-1.67)	1.18(0.82-1.69)
Comorbidity	1.41(1.04-1.90) *	1.35(0.99-1.83)	1.29(0.91-0.82)

\*  $p < .05$ , \*\*\*  $p < .0001$

*UOR. Unadjusted Odds Ratio*

<sup>1</sup> *Adjusted Odds Ratio (age, sex, ethnicity, income)*

<sup>2</sup> *Adjusted Odds Ratio (sex, ethnicity, income, duration of bereavement, relationship to the deceased, and closeness to the deceased).*

### Discussion

This research is one of the few studies to examine the relationship between sudden-death bereavement and mental health outcomes in bereaved university students. Sudden-death bereavement was more common than general bereavement in this bereaved population, with approximately 62% of respondents reporting sudden death bereavement. The high rate of sudden death bereavement is concerning, given the relatively poor mental health outcomes in this population.

With regards to demographic characteristics, females were more likely to report sudden-death bereavement. Compared to White students, students who self-identified as Black or Asian (East or South-East Asian) were more likely to report sudden-death bereavement. Given the demographic differences between our samples, all regression models were adjusted for these demographic factors.

Interestingly, there were no differential effects of sudden death bereavement on at-risk drinking, depression, suicide ideation, or PTSD, contrary to other research that found connections between sudden death bereavement and these mental health concerns (Bolton et al., 2013; Kloep et al., 2014; Lindqvist et al., 2008; Rostila et al., 2013, Séguin et al., 1995; Sveen & Walby, 2008). Students who experienced sudden-death bereavement were more likely to report generalized anxiety disorder; however, this effect did not persist in the adjusted models. One possible explanation is that women are more likely to experience generalized anxiety disorder (Tolin & Foa, 2006), and more women were present in the sudden-death bereaved sample. When the regression models were adjusted for demographic variables, this difference did not persist, suggesting multicollinearity.



Our findings also supported our primary hypothesis of an increased likelihood of complicated grief in the sudden death bereaved population, which is largely consistent with the literature (Mitchell et al., 2005; DeGroot, de Keijser, Neelman; 2006; Dryegove et al., 2003; Currier et al., 2006; Kerstig et al., 2011; Neria & Litz, 2004; Fujisiwa et al., 2010; Nakajima et al., 2012; Momartin et al., 2004). Of note, the "suddenness" of bereavement rather than the mode of bereavement was used as the independent variable in this study. Some research suggests that even when suddenness of death is accounted for, bereavement such as suicide deaths are more correlated with negative grief reactions (Bailey et al., 1999).

In our study, sudden death bereavement was associated with psychiatric comorbidity of CG. However, as reported previously, this effect did not remain in the adjusted models, suggesting that demographic factors could better account for these differences. Complicated grief often co-exists both with depression and PTSD (Simon et al., 2011). In fact, research has suggested that PTSD and CG are strongly related (Maercker & Znoj, 2010). Similarities include the presence of ruminations, avoidance behaviour, intrusions, emotional numbness, and anger (APA, 2013; Marques et al., 2013; Simon et al., 2011). The presence of PTSD symptoms can also incite or exacerbate CG symptoms by interrupting the grieving process (Nakajima et al., 2012). In the DSM-5 in order to qualify for a diagnosis of PTSD, individuals must have witnessed the death, or it be both violent and unexpected. In the DSM-IV, PTSD can be diagnosed if the individual experienced the unexpected loss of a loved one, whether it was violent or witnessed (Keyes et al., 2014). Therefore, research conducted prior to 2013, on the comorbidity of CG and PTSD may not be applicable in the current context.

We did not separate unexpected death versus violent death in our study, another factor which may have contributed to this pattern of results. Furthermore, classifying a death as

"sudden or unexpected" may also require subjective judgment on the part of the bereaved and may not be a reliable assessment (Keyes et al., 2014).

With regards to depression, it is not uncommon for CG and depression to co-exist, complicated grief may be often mistaken for depression (Shear, 2012) However, the dysphoria, avoidance behaviour, rumination, and anhedonia present in CG are generally related to the loss (Shear, 2012). Furthermore, yearning and longing are present in CG but not in depression. (Shear, 2012). In our study we only assessed depression at the time of the study and we did not assess for other mood disorders, e.g. persistent depressive disorder, major depressive disorder, or bipolar disorder. Excluding these conditions from our study, may have contributed to this pattern of results. Stressful life events, such as sudden losses, could trigger substance use (Masferrer et al., 2016). There was no association between sudden loss and alcohol use, but this may be due to the already high levels of alcohol use in this population (DeMartini & Carey, 2012), and we did not examine changes in patterns over time.

The results of this study have significant implications for the care of the bereaved university student population, specifically those experiencing complicated grief. Bereaved individuals generally expect grief to stabilize around the six-month mark (Penman, Breen, Hewitt et al., 2014), and persistent, significant grief after six months is typically indicative of CG (Prigerson et al., 2009). Balk (2001) and Wren (1999) suggested that university students need to be educated about normative grief reactions, especially important when students are dealing with complicated grief. Individuals with CG are likely to report self-devaluation, as well as negative thoughts about the future (Golden & Dagleish, 2012) which could contribute to difficulties with goal setting and self-efficacy (Boelen, 2011) and these symptoms may result in role impairment (Aucherbach et al., 2018). Other negative associations with CG include difficulties managing

painful emotions, engaging in social relationships, and maintaining optimism. These difficulties are especially salient in the context of a university environment and could negatively impact a student's developmental trajectory (Balk, 2001). Engel (1961) proposed that grief is a disease and although natural, should be acknowledged as such and treatment provided if necessary, especially when prolonged. Thus, there is a strong need for appropriate treatment and support for students that are experiencing complicated grief.

Another implication is regarding diagnostic criteria of CG. This study lends support to the necessity of clear, diagnostic criteria to create a more amalgamated approach to diagnosis and treatment of this disorder. CG is a mental disorder and should be treated as such. More information is needed on clear diagnostic criteria, differential diagnoses, prevalence rates, and more research is needed into effective treatments targeted at this issue.

Given the prevalence of grief in the university student population, a more structured approach to providing support, such as a campus bereavement centre (Balk, 1991), may be beneficial. In the same vein, providing education to faculty, staff and peers to identify and respond sensitively to students dealing with bereavement has proven to be a successful strategy (Balk, 1991). Grieving students prefer to seek support from peers (Balk, 2008) and social media has become an important component of processing and memorializing the loss (Varga & Varga, 2019). Time-sensitive and widely available interventions such as peer support, education and training of faculty members, as well as specialized loss and bereavement support provided in counselling centres would help ameliorate the effect of grief in university students (Servaty-Seib, 2006; Taub & Servaty-Seib, 2008). A comprehensive survey of university administrative staff revealed that few universities offer targeted grief support, and when support was available, it was often underutilized (Fagjenbaum et al., 2012).

Our study had important limitations before interpreting these results. Firstly, it was cross-sectional. Therefore, causal inferences regarding sudden death bereavement cannot be made. Second, our sample largely consisted of first-year university students, who may not be representative of the entire university sample. This small sample size and lack of generalizability needs to be considered when interpreting both significant and non-significant findings. Third, the questionnaires did not consider the age of onset of the mental health conditions, which may have predated the bereavement. However, most questionnaires captured current symptomatology, suggesting that while these symptoms may have been present prior to the death of the loved one, they were still present during the study. In the same vein, an examination of severity of symptomatology would have provided more insight into the mental health of this population. A fourth limitation was that the questionnaires were largely reliant on self-report (prone to recall bias) instead of in-person interviews. Fifth, we did not examine at-risk substance use behaviour, e.g. of cannabis or other substances. Considering the rate of alcohol use among the university population is declining with a corresponding increase in marijuana use (Schulenberg, Johnston, O'Malley, 2019), we may be missing some important information.

Future research can address the above limitations. A longitudinal study using a large sample of university students, and examining a wide range of mental health conditions, would provide more insight into the effects of sudden bereavement in university students. Additionally, expanding this research into different populations would provide more insight into the generalizability of results. Currently, diagnostic criteria for Persistent Complex Bereavement Disorder is included in the Appendices of the DSM-5 and therefore, this condition may not be well-recognized. Therefore, more research is needed into the syndrome of CG, in order to formalize its inclusion into the DSM-5, to create a consistent clinical picture. Since we

conducted a quantitative study, a mixed-methods approach to examining grief in this population would also provide more awareness into the experience of bereaved students.

In conclusion, this is one of the first few studies to examine the correlation between sudden death bereavement and poor mental health in university students. By surveying 946 bereaved university students, the study findings extend our understanding of the effects of sudden death bereavement in university students. The frequency of sudden death bereavement is notable. Complicated grief was more prevalent in the sudden death bereaved population regardless of relationship to the deceased and time since death emphasizing the need for increased clinical and policy attention to the consequences experienced by sudden death bereaved students.

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CHAPTER THREE

STUDY TWO

Help-Seeking Behaviour in Sudden-Bereaved University Students

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### Abstract

**Background:** Bereavement among university students is a common but impactful experience which often has significant long-lasting psychological effects. The treatment needs of bereaved university students have not been well studied.

**Objectives:** This study examined demographic, psychiatric, and bereavement-related factors that contribute to the perceived need for healthcare and influence help-seeking behaviour.

**Methods:** 599 first-year university students were surveyed on their experience of bereavement within the past three years. Data was collected on perceived need, help-seeking behaviour, and mental health help-seeking (e.g. psychiatrists, psychologists, and counsellors). Demographic characteristics (age, sex, ethnicity, income), mental health correlates (depression, generalized anxiety, PTSD, complicated grief, suicidality, alcohol use), and bereavement-related factors (duration of bereavement, relationship and quality of relationship regarding the deceased) were examined in conjunction with a perceived need for help and help-seeking behaviour.

**Results:** Demographic factors were not correlated with perceived need. However, ethnicity was associated with both general help-seeking behaviour and mental health help-seeking behaviour. Mental health problems such as depression, generalized anxiety disorder, PTSD, and suicidal ideation were associated with both perceived need for help and help-seeking, including mental health help-seeking behaviour.

**Conclusions:** Psychological distress is associated with help-seeking behavior; however, students report several barriers to receiving care. Strategies to enhance help-seeking among bereaved university students should be tailored to the specific populations and promote interventions such as peer support.

### **Introduction**

University students are vulnerable to mental disorders, with many common disorders having the first onset in early adulthood (Chartier et al., 2018). Such students are at increased risk for anxiety, depressive, and substance use disorders (Dennhardt & Murphy, 2013; Ibrahim, Kelly, Adams, & Glazebrook, 2013; Johnston, O'Malley & Bachman, 2012; Kessler et al., 2007; Stallman, 2008) compared to the general population. Additionally, suicidal thoughts and behaviours are quite common in young adults (American College Health Association, 2019; Auerbach et al., 2016; Eisenberg, Gollust, & Hefner, 2007; Eskin et al., 2016; Stallman, 2008; Statistics Canada, 2015). Among this population, the traumatic or unexpected death of a loved one is a commonly reported event (Frazier et al., 2009). Bereavement related to sudden causes of death is associated with a high risk of hospitalization for suicide attempts, depressive disorders, psychotic disorders, and personality disorders (Brent et al. 2009; Wilcox et al. 2010), as well as complicated grief (CG) (Dillen, Fontaine, & Verhofstadt-Denève, 2009; Golden & Dalglish, 2012). Despite this understanding of the detrimental effects of bereavement, certain populations such as bereaved university students have been little studied in bereavement research. So little is known about the treatment needs of this bereaved population that it has been likened to a "silent epidemic" (Neimeyer et al., 2008, p. 28).

In general, many individuals who report mental health concerns are not receiving appropriate treatment (Motjabai et al., 2002). This is especially true of university students. Only 36% of North American university students who screened positive for a mental health concern received care, and of those, less than half were provided with what is considered adequate care, either due to not seeking help or to lack of resources (Eisenberg, Golberstein, & Gollust, 2007). The Andersen Behaviour Model is often used to predict help-seeking (Andersen & Davidson,

1995; Babitsch, Gohl, & Lengerke, 2012). The model includes predisposing factors (sociodemographic influences), enabling factors (financial factors and care availability), and need factors (perceived need for health). According to the Andersen Behaviour Model, (Andersen, 1995; Babitsch, Gohl, & Lengerke, 2012) if individuals recognize a need for care, have the necessary resources to access care, and their attitudes towards help-seeking are positive, they are more likely to seek help (Babitsch et al., 2012).

Amongst university students' stigma among men, ethnic minorities, and professional program students (e.g. medical students) is associated with lower help-seeking behaviour (Eisenberg et al., 2007). Perception of need also determines whether bereaved students seek help, in that bereaved students generally do not seek support for the bereavement itself, but rather for associated secondary effects such as insomnia, difficulty concentrating, anxiety, and academic challenges (Balk, 2001; Hardison, Neimeyer, & Lichstein, 2005). Individuals who experience distress may attempt to determine whether they could benefit from intervention and assess the pros and cons of doing so, including whether they can access affordable, effective care (Motjabai, 2002). Grieving students who have mental health problems may perceive their problems as only temporary (i.e. due to the grief) or may not recognize their need for care (Balk, 2001). Moreover, students seeking help may be subject to long waiting lists and insufficient resources (Downs & Eisenberg, 2012; Dyregrov, 2002; 2011; McMenemy, Jordan, & Mitchell, 2008; Provini, Everett, & Pfeffer, 2000).

### **Aims of the Current Study and Limitations of Previous Research**

In general, there is limited research on sudden-death bereavement, with most studies focusing on specific deaths such as suicides. There is also little research on bereaved university students in a Canadian context, which is important given the structural differences in the

healthcare systems across North America. The purpose of this study was to examine self-perceived need and help-seeking behaviour in sudden-death bereaved university students. Using a comprehensive survey, we sought to answer the following questions.

1) Do demographic factors and bereavement-related factors (e.g. age, gender, ethnicity, income, living situation, relationship to the deceased, time since death, and closeness to the deceased) affect perceived need and help-seeking behaviour?

2) What were the clinical factors (e.g. mental disorders) associated with self-perceived need and help-seeking?

## **Method**

### **Participants**

First-year introductory psychology students from the University of Manitoba were recruited through online advertisements describing a study on bereavement. This cross-sectional study was conducted using Qualtrics (Qualtrics, Provo, UT) a software for online surveys. The Psychology Research Ethics Board at the University of Manitoba approved this study. Inclusion criteria consisted of being over the age of eighteen and having lost a friend, a family member, or a significant other through a sudden, unexpected death over the past three years. Recruitment was conducted between March 2017 to November 2018. All students were awarded course credit for participation and received a list of community and university-based mental health resources after termination, regardless of the status of survey completion. The survey consisted of approximately 75 questions, and on average took 90 minutes to complete.

### **Questionnaires**

**The Patient Health Questionnaire (PHQ-9-item version).** The Patient Health Questionnaire (PHQ-9) is used to assess for the presence of depression and suicidal ideation. It is

a 9-item scale that rates symptoms on a 0-3 Likert type scale ('not at all' to 'nearly every day'), and total scores range from 0-27. Scores less than five are suggestive of the absence of depression. Internal consistency ranges from 0.86 to 0.89 (Cannon et al., 2007; Diez-Quevedo et al., 2001; Kroenke & Spitzer, 2002). With a cutoff of >10, this scale has a reported sensitivity of 88% and a specificity of 88% (Kroenke et al., 2001) when compared with diagnostic interview (Cannon et al., 2007; Diez-Quevedo et al., 2001; Kroenke & Spitzer, 2002). In our study, we used scores on the PHQ-9 as a categorical variable, comparing scores less than 5 to scores greater than five due to the cutoffs of the scale.

With regards to suicide ideation, endorsement of the PHQ-9 question "thinking I would be better off dead or hurting myself in some way" has been identified as a strong predictor of risk of future suicidal behavior (Rossom, Coleman, Ahmedani, et al., 2017). Individuals who endorsed experiencing suicide ideation more than several days over the past two weeks or more were classified as experiencing suicide ideation.

**The Generalized Anxiety Disorder Assessment -7 (GAD-7).** The GAD-7 is a seven-item questionnaire that captures generalized anxiety disorder symptomatology over the past two weeks on a 0-3 Likert-type scale ('not at all' to 'nearly every day') (Spitzer, Kroenke, Williams, & Löwe, 2006). Scores range from 0 to 21. Scores over 5 are suggestive of generalized anxiety disorder. The scale has a good internal consistency ranging from 0.89 to 0.92 (Löwe et al., 2008; Spitzer et al., 2006), a sensitivity of 89% and a specificity of 82% using a threshold of 10 (Spitzer et al., 2006) when compared with a diagnostic interview. We used scores on the scale as a categorical variable with scores over five compared to scores under 5, due to the scale cutoffs.

**The National Stressful Events Survey PTSD Short Scale (NSESS).** The National Stressful Events PTSD Short Scale (Kilpatrick et al., 2013) measures the severity of

posttraumatic symptoms over the previous seven days. The NSESS is a nine-item scale, with individual items rated from 0 (*not at all*) to 4 (*extremely*). Scores on the measure range from 0 to 36. It has a high reliability of 0.91 and acceptable validity, even when compared to more established, longer measures of PTSD (Le Beau, Mischel, Resnick et al., 2014).

**The Alcohol Use Disorders Identification Test (AUDIT).** The AUDIT is a 10- item- screening instrument that measures harmful alcohol use, abuse and dependence. The AUDIT has been validated for use in university student populations with a cutoff of 5 in females and a cutoff of 7 suggestive of at-risk drinking in university student populations (De Martini & Carey, 2012). A cutoff of five or six is associated with a sensitivity of 0.76 and specificity of 0.79 (de Meneses-Gaya et al., 2009) when compared with a diagnostic interview. The internal consistency of the AUDIT ranges from 0.81 to 0.93 (de Meneses-Gaya et al., 2009).

**The Inventory of Complicated Grief (ICG).** The Inventory of Complicated Grief (ICG) is a 19- item self-report scale used to assess complicated grief (Prigerson et al. 1995). Respondents are asked questions regarding their current experience of the bereavement and the frequency of these experiences on a 5-point Likert scale ranging from "never", "rarely", "sometimes", "often" and "always". Scores can range from 0 to 79, with scores over 25 suggestive of complicated grief. The internal consistency of this measure is acceptable is very good with a Cronbach's alpha at 0.94 (Prigerson et al.,1995).

**Help-seeking behaviour.** Perceived need, help-seeking behaviour, and barriers to care items were constructed based on previous studies (Motjabai et al., 2002). The help-seeking questionnaire was based on interview questions used in the Canadian Community Health Survey (2002). This measure was adapted into a self-report measure for the university population, which allowed for ease of comparison across studies. Any voluntary contact with a general practitioner,



counsellor, social worker, psychologist, or psychiatrist for emotional or substance use problems over the past twelve months was considered help-seeking. Additionally, seeking information about services available, as well as using medication for mental health concerns, was also classified as help-seeking behaviour. If individuals sought help from a psychiatrist, psychologist, or social worker then it was classified as mental health help-seeking. If respondents sought help, they were classified as having self-perceived need. Additionally, if they did not seek help but reported that they needed help, they were likewise categorized as having a self-perceived need for care. We also collected information on why individuals did not seek care.

**Other information.** Demographic information on sex, age, ethnicity, relationship status, living situation, and income was collected. We also collected information on the bereavement including the time since death, the relationship to the deceased (e.g. friend, parent, sibling, extended family member) and how close the respondent was to the deceased.

### **Statistical Analysis**

Data analysis was conducted using SPSS 25.0 (IBM, 2017). Binary logistic regressions were performed using demographic and bereavement related factors as predictor variables. The criterion variables were a) self-perceived need, b) help-seeking behaviour and c) mental health help-seeking behaviour. Analyses were conducted once without any covariates. Subsequent analyses adjusted for demographic factors (Model 2; age, sex, income, ethnicity) and bereavement related factors (Model 3; demographic factors as well as time since death, relationship to the deceased and closeness of the relationship with the deceased).

### **Results**

Of the 599 participants that responded to our survey, 28% (172) of students sought help over the past year. Figure 1 outlines the categories of help-seeking behaviour among students

who sought help. A large majority of students sought information about services available (65.7%), and 33.1% reported that they had sought medication. Additionally, 51.7% received counselling or therapy services, and of those, 21.9% reported that they had received help from psychiatrists, psychologists, social workers, and counsellors.

With regards to barriers to care, students described time constraints due to academic and work demands (24%), stigma (5%), not being ready (8%), discomfort (10%), and lack of confidence in the healthcare provider (9%). Low availability of help also interfered with help-seeking (21%). Some individuals reported their preference to rely on family and friends (13%) and spirituality (6%).

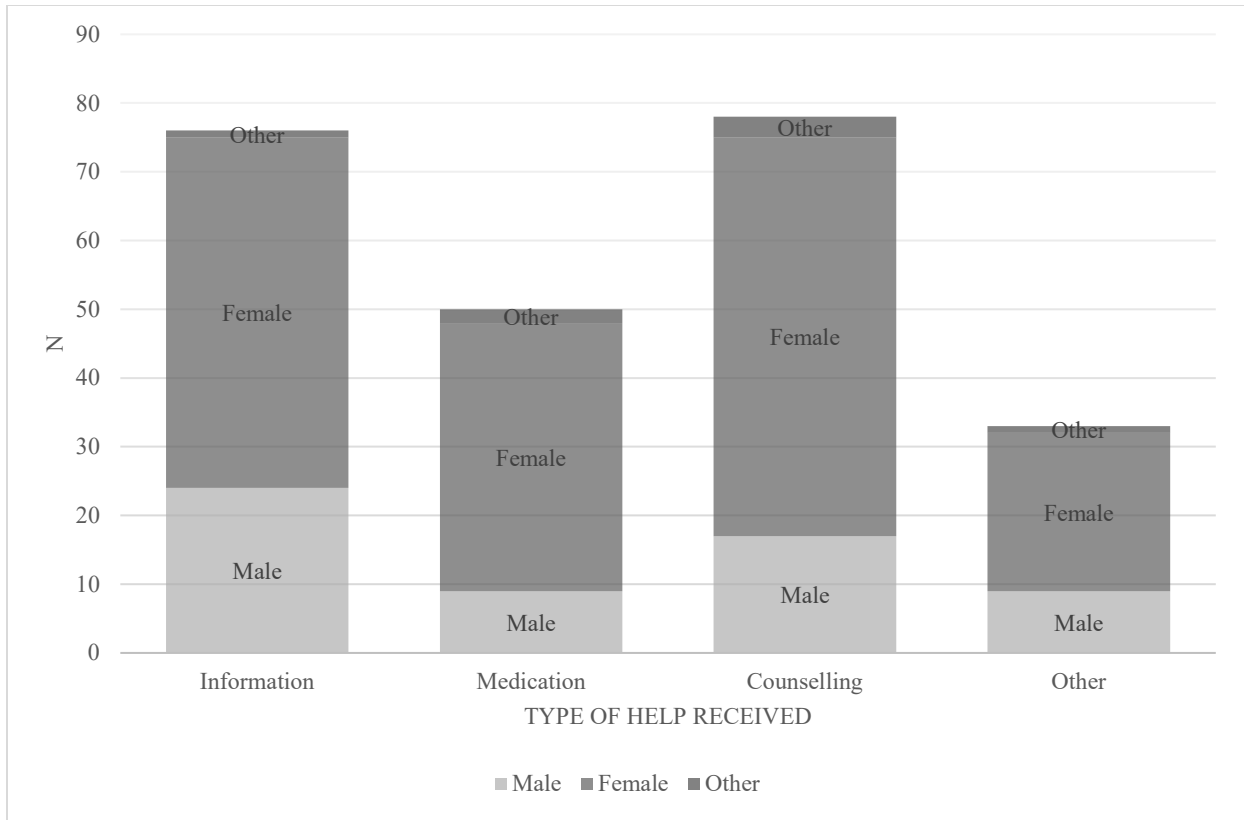


Figure 1. Types of help received by sudden death bereaved university students

**Correlates of perceived need.** Table 1a. outlines demographic factors associated with self-perceived need among sudden death bereaved students. Demographic and bereavement-related factors did not significantly contribute to the perception of need.

Table 1b displays the associations between perceived need and mental disorders. Students who reported depression ( $AOR^2 = 2.22$ , 95% CI: 1.39 - 3.50,  $p < .05$ ), PTSD ( $AOR^2 = 2.84$ , 95% CI: 1.72 - 4.70,  $p < .001$ ), CG ( $AOR^2 = 1.97$ , 95% CI: 1.13 - 3.44,  $p < .05$ ), and suicidal thoughts ( $AOR^2 = 2.27$ , 95% CI: 1.34 - 3.87,  $p < .05$ ) were more likely to report self-perceived need.

Having a mental health concern (depression, generalized anxiety disorder, PTSD) combined with a substance use condition was also associated with the perception of need compared to any of these conditions alone ( $AOR^2 = 3.32$ , 95% CI: 1.67 - 6.63,  $p < .05$ ). Having CG with any other mental disorder was also associated with an increased likelihood of a self-perceived need for care ( $AOR^2 = 8.86$ , 95% CI = 1.35 - 58.46,  $p < .05$ ). These associations remained even when adjusted for demographic and bereavement related factors.

Table 1a

*Demographic characteristics of the sample that reported perceived need.*

	Perceived need		No Perceived need		OR(CI)
	n	% <sup>1</sup>	n	%	OR
<b>Age</b>					
18-23	294	90.2	212	85.1	1.00
24 and above	32	9.8	37	14.9	1.60(0.97-2.66)
<b>Gender</b>					
Male	109	33.2	70	28.1	1.00
Female	217	66.2	176	44.8	1.26(0.88-1.81)
Other	2	0.6	3	1.2	2.34(0.38-14.3)
<b>Family Income</b>					
>9000	119	36.3	87	34.9	1.00
10,000-29999	78	23.8	44	17.1	0.73(0.30-1.74)
30000 and above	131	39.9	118	47.4	0.98(0.50-1.91)
<b>Ethnicity</b>					
White/European	157	47.9	108	43.4	1.00
Arab/ Egyptian	8	2.4	5	2.0	.90(0.29-2.85)
East and South East Asian	36	11.0	23	9.2	0.92(0.52-1.66)
Black/Caribbean Islander	56	17.1	49	19.7	1.27(0.81-2.00)
Indian Subcontinent	18	5.5	19	7.6	1.53(0.77-3.06)
Hispanic/Latino	4	1.2	3	1.2	1.09(0.24 -4.97)
Other	25	7.6	20	8.0	1.16(0.62-2.20)
<b>Relationship</b>					
Parent/ Sibling	9	2.8	14	5.8	1.00
Extended Family	194	59.5	143	59.3	0.47(0.20-1.12)
Friend	118	36.2	78	32.4	0.43(0.18-1.03)
Significant other	4	1.2	6	2.5	0.96(0.21-4.40)

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	Perceived need		No Perceived need		OR(CI)
<b>Duration of Bereavement</b>					
1 year	101	32.9	71	30.7	1.00
1 to 2 years	66	21.5	50	21.6	1.07(0.67-1.74)
2 to 3 years	77	25.1	60	26.0	1.11(0.70-1.75)
3 to 4 years	63	20.5	50	21.6	1.13(0.70-1.82)

\* $p < .05$ , \*\* $p < .001$ , \*\*\* $p < .0001$  <sup>1</sup>Percentages refer to column percentages

Table 1b.

*Logistic regressions examining the associations between perceived need and mental conditions in bereaved university students.*

	<u>UOR (95% CI)</u>	<u>AOR<sup>1</sup>(95% CI)</u>	<u>AOR<sup>2</sup>(95% CI)</u>
Depression	2.00(1.40-2.86)***	2.12(1.38-3.27)*	2.22(1.39-3.56)*
Generalized Anxiety	1.70(1.22-2.40)*	1.52(1.04-2.27)*	1.51(0.98-2.33)
PTSD	2.22(1.52-3.25)***	2.81(1.75-4.49)***	2.84(1.72-4.70)***
Complicated Grief	1.75(1.18-2.61)*	1.80(1.11-2.91)*	1.97(1.13-3.44)*
At Risk- Drinking	0.70(0.39-1.26)	0.63(0.31-1.27)	0.78(0.36-1.69)
Suicidal Thoughts	2.01(1.33-3.01)*	2.17(1.33-3.54)*	2.27(1.34-3.87)*
Comorbidity (Mood, Anxiety, PTSD)	1.48(0.93-2.34)	1.92(1.10-3.35)*	2.14(1.15-3.99)*
Comorbidity (Mood, Anxiety, PTSD, Alcohol Use)	1.80(1.11-2.94)*	2.67(1.46-4.81)*	3.32(1.67-6.63)*
Comorbidity (Mood, Anxiety, Alcohol use, Complicated Grief)	1.65(0.64-4.23)	1.99(0.57-6.88)	8.86(1.35-58.46)*

\* $p < .05$  \*\* $p < .001$  \*\*\* $p < .0001$

*UOR. Unadjusted Odds Ratio*

<sup>1</sup> *Adjusted Odds Ratio (age, sex, ethnicity, income)*

<sup>2</sup> *Adjusted Odds Ratio (sex, ethnicity, income, duration of bereavement, relationship to the deceased, and closeness to the deceased).*

**Correlates of help-seeking.** Table 2a. outlines demographic factors as related to help-seeking among sudden death bereaved university students. With regards to bereavement-related characteristics, compared to individuals that had lost a parent or a sibling suddenly, individuals who had lost a friend (OR= 0.27, 95% CI: 0.12-0.62,  $p < .005$ ) or an extended family member (OR= 0.29, 95% CI: 0.11-0.69,  $p < .005$ ) were less likely to have sought or received help.

Table 2b. displays the associations between help-seeking and mental disorders. Individuals who had reported depression (AOR<sup>2</sup>= 2.28, 95% CI:1.49 - 3.50,  $p < .001$ ), generalized anxiety (AOR<sup>2</sup>= 2.46, 95% CI:1.50 - 3.77,  $p < .001$ ), PTSD (AOR<sup>2</sup>= 2.80, 95% CI: 1.79 - 4.40,  $p < .001$ ), or suicidal thoughts (AOR<sup>2</sup>= 2.24, 95% CI: 1.38-3.63,  $p < .05$ ) were more likely to report help-seeking behaviour. Having a mental health condition (depression, generalized anxiety disorder, PTSD), combined with a substance use condition, was also associated with increased help-seeking behaviour compared to any of these conditions alone (AOR<sup>2</sup>= 1.85, 95% CI: 1.01-3.41,  $p < .05$ ). These associations remained even when adjusted for demographic and bereavement-related factors.



Table 2a.

*Demographic characteristics of the help seeking sample.*

	No help sought		Help sought		OR(CL)
	n	%	n	%	OR
<b>Age</b>					
18-23	348	89.7	145	29.4	1.00
24 and above	40	10.3	27	15.7	1.62(0.96-2.74)
<b>Gender</b>					
Male	125	32.1	48	27.9	1.00
Female	263	67.4	121	70.3	1.20(0.81-1.78)
Other	2	0.5	3	1.7	3.90(0.63-24.1)
<b>Family Income</b>					
>9000	138	35.4	62	36.0	1.00
10,000-29999	86	22.1	32	18.6	0.83(0.50-1.37)
30000 and above	166	42.6	78	45.3	1.05(0.70-1.56)
<b>Ethnicity</b>					
White/European	189	48.5	73	27.9	1.00
Arab/Egyptian	10	2.6	2	1.2	0.52(0.11-2.42)
East and South East Asian	42	10.8	14	8.1	0.86(0.45-1.67)
Black/ Caribbean Islander	70	17.9	33	19.2	1.22(0.75-2.00)
Indian Subcontinent	27	6.9	16	9.3	1.53(0.78-3.013)
Hispanic/Latino	5	1.3	2	1.2	1.04(0.20-5.46)
Other	28	7.2	15	8.7	1.39(0.70-2.75)
<b>Relationship</b>					
Parent/ Sibling	232	59.5	96	55.8	1.00
Extended Family	150	38.5	72	41.9	0.29(0.11-0.69)**
Friend	8	2.1	4	2.3	0.27(0.12-0.62)**
Significant other	6	1.6	4	2.4	0.46(0.10-2.12)
Child	1	0.2	0	0.0	NA

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	No help sought		Help sought		OR(CL)
<b>Duration of Bereavement</b>					
1 year	122	33.2	46	29.5	1.00
1 to 2 years	81	22.1	31	27.7	1.02(0.59-1.73)
2 to 3 years	88	24.0	46	29.5	1.39(0.85-2.27)
3 to 4 years	76	20.7	33	21.2	1.15(0.68-1.96)

\* $p < .05$ , \*\* $p < .001$ , \*\*\* $p < .0001$  <sup>1</sup>Percentages refer to column percentages

Table 2b.

*Logistic regressions examining the associations between any help-seeking and mental health conditions in bereaved university students*

	<u>UOR (95% CI)</u>	<u>AOR<sup>1</sup>(95% CI)</u>	<u>AOR<sup>2</sup>(95% CI)</u>
Depression	2.15(1.48-3.14)***	2.20(1.49-3.26)***	2.28(1.49-3.50)***
Generalized Anxiety	2.12(1.46-3.05)***	2.30(1.56-3.39)***	2.46(1.50-3.77)***
PTSD	2.70(1.82-4.02)***	2.80(1.23-4.52)***	2.80(1.79-4.40)***
Complicated Grief	1.41(0.93-2.13)	1.36 (0.88-2.11)	1.47(0.88-2.43)
At Risk- Drinking	0.90(0.49-1.67)	1.06(0.56-2.03)	1.26(0.63-2.49)
Suicidal Thoughts	2.03(1.32-3.12)*	2.06(1.29-2.72)*	2.24(1.38-3.63)*
Comorbidity (Mood, Anxiety, PTSD)	1.26(0.79-2.02)	1.22(0.75-2.00)	1.24(0.72-2.12)
Comorbidity (Mood, Anxiety, PTSD, Alcohol Use)	1.91(1.14-3.21)*	1.74(1.01-3.01)*	1.85(1.01-3.41)*
Comorbidity (Mood, Anxiety, Alcohol use, Complicated Grief)	2.53(0.86-7.42)	2.96(0.87-10.04)	4.24(0.92-19.53)

\* $p < .05$  \*\* $p < .001$  \*\*\* $p < .0001$

*UOR. Unadjusted Odds Ratio*

<sup>1</sup> *Adjusted Odds Ratio (age, sex, ethnicity, income)*

<sup>2</sup> *Adjusted Odds Ratio (sex, ethnicity, income, duration of bereavement, relationship to the deceased, and closeness to the deceased)*

**Correlates of mental help-seeking.** Table 3a. outlines demographic factors associated with mental health help-seeking among sudden death bereaved university students. Among individuals who expressed perceived need, black students were less likely than white students to seek mental health help (OR= 0.20, 95% CI: 0.05-0.87,  $p < .05$ ). No other demographic factors were significantly associated with mental health help-seeking. Similar to any help-seeking behaviour, individuals who had lost a close family member, such as parents and siblings, were more likely to seek mental health help compared to those who lost extended family members.

Table 3b. displays the associations between mental health help-seeking and mental health symptoms. Individuals who self-reported depression (AOR<sup>2</sup> = 3.27, 95% CI: 1.63 - 6.65),  $p < .001$ ), generalized anxiety (AOR<sup>2</sup> = 3.70, 95% CI: 1.74 - 7.84,  $p < .001$ ), PTSD (AOR<sup>2</sup> = 3.64, 95% CI: 1.71 - 7.72,  $p < .001$ ) or suicidal thoughts. (AOR<sup>2</sup> = 3.15, 95% CI: 1.50 - 6.63,  $p < .001$ ) were nearly three times more likely to report mental help-seeking behaviour. These associations remained even when adjusted for demographic and bereavement related factors.

Table 3a.

*Demographic characteristics of the mental help seeking sample.*

	No mental health help sought		Mental health help sought		OR(CL)
	n	% <sup>1</sup>	n	% <sup>1</sup>	OR
<b>Age</b>					
18-23	405	89.2	64	82.1	1.00
24 and above	49	10.8	14	17.9	1.80(0.94-3.46)
<b>Gender</b>					
Male	147	32.2	17	21.8	1.00
Female	307	84.1	58	15.9	1.63(0.92-2.90)
Other	2	67.3	3	3.8	13.0(2.02-83.2)**
<b>Family Income</b>					
>9000	160	35.1	28	35.9	1.00
10,000-29999	147	32.2	22	28.2	0.82(0.41-1.63)
30000 and above	34	7.5	14	17.9	1.03(0.61-1.78)
<b>Ethnicity</b>					
White/European	216	47.4	40	15.6	1.00
Arab/Egyptian	6	1.3	1	1.3	0.90(0.12-7.68)
East and South East Asian	53	11.6	2	2.6	1.20(0.25-5.76)
Black/ Caribbean Islander	81	17.8	14	17.9	0.20(0.05-0.87)*
Indian Subcontinent	34	7.5	4	5.1	0.93(0.48-1.81)
Hispanic/Latino	6	1.3	1	1.3	1.58(0.64-3.90)
Other	33	7.2	8	10.3	1.39(0.70-2.75)
<b>Relationship</b>					
Parent/ Sibling	14	3.1	7	9.1	1.00
Extended Family	268	60.0	42	13.5	0.31(0.12-0.82)*
Friend	158	35.3	26	33.8	0.33(0.12-0.89)*
Significant other	6	1.3	2	2.6	0.67(0.12-4.20)
Child	1	0.2	0	0.0	NA

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	No mental health help sought		Mental health help sought		OR(CL)
<b>Duration of Bereavement</b>					
1 year	138	32.2	25	35.7	1.00
1 to 2 years	93	21.7	12	17.1	0.72(0.34-1.49)
2 to 3 years	104	24.3	22	31.4	1.17(0.62-2.19)
3 to 4 years	93	21.7	11	15.7	0.65(0.31-1.39)

\* $p < .05$ , \*\* $p < .001$ , \*\*\* $p < .0001$ . <sup>1</sup>Percentages refer to column percentages

Table 3b.

*Logistic regressions examining the associations between mental health help-seeking and mental health conditions in bereaved university students.*

	<u>UOR (95% CI)</u>	<u>AOR<sup>1</sup>(95% CI)</u>	<u>AOR<sup>2</sup>(95% CI)</u>
Depression	2.61(1.60-4.26)***	4.18(2.28-7.67)***	3.27(1.63-6.56)**
Generalized Anxiety	3.74(2.16-6.47)***	3.93(1.93-7.98)***	3.70(1.74-7.84)**
PTSD	3.65(2.19-6.07)***	4.08(2.01-8.10)***	3.64(1.71-7.72)**
Complicated Grief	1.29(0.73-2.27)	1.56(0.72-3.38)	1.26(0.54-2.96)
At Risk- Drinking	1.62(0.78-3.34)	1.64(0.64-4.21)	1.40(0.52-3.73)
Suicidal Thoughts	2.67(1.59-4.51)***	3.34(1.70-6.58)***	3.15(1.50-6.63)**
Comorbidity (Mood, Anxiety, PTSD)	2.53(1.53-4.20)***	1.77(0.79-4.00)	1.36(0.55-3.39)
Comorbidity (Mood, Anxiety, PTSD, Alcohol Use)	0.50(0.26-0.97)*	2.47(1.03-5.93)*	2.43(0.94-6.30)
Comorbidity (Mood, Anxiety, Alcohol use, Complicated Grief)	4.03(0.50-32.3)	5.63(0.36-87.9)	10.0(0.29-346.7)

\* $p < .05$  \*\* $p < .001$  \*\*\* $p < .0001$

*UOR. Unadjusted Odds Ratio*

<sup>1</sup> *Adjusted Odds Ratio (age, sex, ethnicity, income)*

<sup>2</sup> *Adjusted Odds Ratio (sex, ethnicity, income, duration of bereavement, relationship to the deceased, and closeness to the deceased)*

### Discussion

This study aimed to examine correlates of self-perceived need for care, mental health help-seeking behaviour, and any help-seeking among a sample of bereaved university students. Demographic factors, bereavement related factors, and mental health-related factors were all examined in conjunction with perceived need and any help-seeking. Among our sample, only 28% of sudden death bereaved students had sought help, compared to 54% of students who reported a need for care. This disparity between the self-perceived need for care and actually seeking help is consistent with the previous literature on help-seeking behavior in university students (Eisenberg, Hunt, & Speer, 2012). In our sample, reported barriers to care by sudden-death bereaved students included a lack of access to resources, stigma, competing commitments, and poor availability of services, also consistent with prior literature (Downs et al., 2012). These barriers to care are especially concerning given the several associated adverse outcomes from sudden-death bereavement (Bolton et al., 2013). Furthermore, students in our sample also cited a preference to seek help from more informal means, i.e. by relying on their family, friends, and spiritual beliefs.

Perceiving a need for help, an essential aspect of help-seeking behavior, was not related to age, sex, ethnicity, or family income. This result is somewhat inconsistent with previous literature, which has found self-perceived need often differs by demographic characteristics. Previous research has found that women and younger individuals are more likely to report perceived need (Katz et al., 1997; Rabinowitz et al., 1999). However, we did not find any associations between perceived need and demographic factors. It is possible that we may have failed to find age-related associations due to the relative homogeneity of our sample with respect to age. Furthermore, while some research has



found that women and individuals who identify as White/Caucasian are more likely to seek help (Andersen & Newman, 2005; Nash et al., 2017), demographic factors interact with each other in more complex ways (Villatoro et al., 2018). Emerging evidence suggests intersectionality (i.e. how various demographic factors interact with each other) must be considered, a facet we did not examine in our research (Villatoro et al., 2018).

Moreover, self-perceived need as a construct is defined differently across research studies, and involves an element of self-awareness (Villatoro et al., 2018); therefore, our study may not have accurately captured perceived need due to our measure of help-seeking. Given that we modified a measure designed to be administered in an interview format to a self-report form, our measure may not have been adequately valid or reliable.

With regards to general help-seeking behaviour, students who lost a parent or sibling were more likely to seek help than those who had lost a friend or an extended family member. However, the perceived need for care after bereavement did not differ by familial relationship. Prior literature shows that a kinship relationship is associated with greater bereavement distress after a sudden-death bereavement; however, non-kin such as friends and coworkers also experience bereavement distress (Young et al., 2012). In our study, we did not find differences in self-perceived need for care based on kinship relationship to the deceased. Still, there were significant differences in any help-seeking with immediate family members more likely to seek help compared to more distant relatives or non-kin. One explanation for this pattern of results is that immediate family members are more distressed due to the closeness to the deceased (Young et al., 2012) and therefore, more likely to seek help. An alternative explanation is that the grief of extended family members or close friends may not be understood, and consequently, there may be a

lack of support offered for these individuals (Leichtentritt et al., 2013; Meagher & Balk, 2013).

When only mental-health help-seeking behaviour was examined, Black students were less likely to seek mental health help compared to White students, largely consistent with the literature (Eisenberg et al., 2007; CAUS & CMHA, 2013). Due to structural vulnerabilities (e.g. greater number of Black Canadians living in poverty) (Khenti, 2014); young Black Canadians are more vulnerable to certain mental health concerns such as depression, anxiety, and suicidality (Khenti, 2014). However, young Black individuals are also less likely to seek mental health help (Taylor & Kuo, 2019).

Depression, generalized anxiety disorder, PTSD, and suicidal ideation were positively associated with perceived need, any help-seeking behavior, and mental-health help-seeking behavior. These results are consistent with the literature suggesting that increased symptomatology is associated with help-seeking behavior (Eisenberg et al., 2007). PTSD was shown to have the strongest relationship with perceived need. Recent research points to more physical and mental health comorbidities (e.g. alcohol and substance use) with PTSD compared to individuals without PTSD (Boscarino et al., 1997; McLeay, Harvey, Romaniuk et al., 2017; O'Toole et al., 2009). Therefore, it is likely that students experiencing PTSD could be experiencing more distress, and thus perceiving themselves as in a greater need for care.

Although we did not examine the severity of symptomatology, comorbidity was positively associated with increased self-perceived need as well as increased help-seeking, consistent with the previous literature (Rosenthal et al., 2008; Motjabai et al., 2002). These results suggest that students were experiencing significant distress.

Complicated grief was associated with perceived need but not with any help-seeking. While bereaved university students recognize the need for help, there may be a lack of awareness about treatment options for CG or a preference to seek help from more informal means (Provini, Cynthi, Everett, & Pfeffer, 2000). The literature indicates that although a majority of bereaved young adults perceived a need for help, they were reluctant to seek help due to a lack of motivation or support to seek help (Dyregrov, 2011). Furthermore, while most individuals experience difficulties with depression and anxiety post-loss, many people have difficulty distinguishing between a normal and pathological grief reaction, and may not seek help (Shear, 2012).

Suicidality was also associated with increased self-perceived need, increased mental health help-seeking, and increased likelihood of any help-seeking behaviour, also consistent with the literature (Downs & Eisenberg, 2009). In 2000, the National College Health Assessment found that approximately only 20% of suicidal students received care (Kisch et al., 2000). Therefore, further research to examine whether receiving help had any impact on suicidality is warranted. Theoretically, these findings could provide support for the Andersen behaviour model as they suggest that these students have a high self-perceived need for care and are seeking help. The fact that students are seeking help suggests that there are resources they can access, and a recognition of a need for care. (Andersen, 1995; Andersen & Newman, 2005).

**Strengths and Limitations.** Some limitations of the study include uncertain reliability and validity of measurement of help-seeking and lack of measurement of stigma. Measuring stigma may have provided more insight into help-seeking behaviour and barriers to care. We also did not capture the age of onset of mental health conditions, which may have provided a clearer picture of outcomes specifically due to bereavement. Most questionnaires captured data only

over the past several weeks. If students were recently experiencing symptoms of mental health conditions, they might not have had a chance to seek help. Finally, due to the cross-sectional nature of this study, causal pathways cannot be drawn.

This study is one of the few to assess help-seeking behaviour in the university student population. The large sample size, comprehensive survey, and valid and reliable mental health measures provide us with unique insight into the treatment needs of this population.

**Implications for policy and practice.** This study provides insight into the needs of sudden death bereaved students and underscores several gaps in service provision. Many students in our sample reported embarrassment about seeking help, a preference for managing on their own or chose to seek help from family and friends. Given that students largely chose to seek help from their friends, campuses should capitalize on peer support programs which may be a stepping-stone to accessing more professional resources. Further,

Complicated grief was associated with perceived need but not with any help seeking. This suggests that while bereaved university students recognize the need for help, there may be a lack of awareness about treatment options for CG or a preference to seek help from more informal means (Provini, Cynthi, Everett, & Pfeffer, 2000). This is likely due to a lack of awareness and potentially a dismissal of any symptomatology as temporary and normative due to grief (Shear, 2012). This highlights the importance of an awareness of pathological grief reactions among university faculty, staff, and students.

Unfortunately, even among those who seek help, help-seeking is not without its challenges as many university students often report ignorance regarding how best to help their grieving counterparts (Balk, 1997). In fact, in a university environment, students may be away from their normal support network of family members. Students in our sample also cited a

preference to seek help from more informal means, i.e. by relying on their family and friends. In times of stress, university students generally prefer approaching their peers for support (Eisenberg et al., 2007a). However, their peers may not be adequately equipped enough to provide constructive help or empathy to the grieving student (Balk et al., 1997).

Education of students on the mourning process as well as raising an awareness of grief reactions and CG is important (Hardison et al., 2015). Students need to be educated on the availability of effective interventions for CG (e.g. Complicated Grief Therapy). Raising awareness about the fact that there exist evidence-based treatment for pathological grief reactions, may further incite students to seek care. Education of faculty, staff, and administration about grief could also help to increase access to care (Fagjenbaum et al., 2012). Alongside raising awareness of normative versus complicated grief reactions, it is important to increase availability of free or low-cost services on campus. Balk (2001) recommended the creation of ‘campus bereavement centres’, providing support for grieving students. In order to increase access to care, some universities have opened counselling clinics in frequently accessed student areas e.g. near recreation centres, or coffee shops. This increases the visibility of services offered and may help increase access to care. (Reilly, 2018). However, more research into the efficacy of this approach is needed. Another way to increase service accessibility is to provide care through electronic means, which has demonstrable effectiveness for supporting bereaved individuals (Vanderwecker and Prigerson, 2004).

**Future directions.** Future studies should examine the longitudinal effects of help-seeking behaviour on university students, as well as assessing the effectiveness of the help-sought. It would also be beneficial to explore barriers to care and evidence-based interventions to alleviate symptoms of complicated grief. More research needs to be conducted on effective treatment for

CG either by itself or comorbid with other conditions, so that we can increase access to effective as well as widely available care.

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CHAPTER FOUR

STUDY THREE

The Association between Coping Style and Mental Health among Sudden Bereaved University

Students

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### Abstract

**Background:** Sudden-death bereavement is associated with several negative sequelae over and above loss due to an expected death. Adjustment to bereavement is often determined by the adaptiveness or maladaptiveness of the coping strategies used.

**Objectives:** The objectives of this study were to determine the associations between coping strategies and mental health disorders in sudden-death bereaved university students.

**Methods:** We surveyed 599 sudden-death bereaved university students on the coping strategies they commonly used, following Zuckerman and Gagne's (2003) model of coping. We examined the associations between adaptive (self-help, optimism, problem-solving) and maladaptive coping strategies (rumination, avoidance) and mental disorders using logistic regressions.

**Results:** Among sudden death bereaved university students, using adaptive coping skills such as approaching situations with optimism, was associated with a lower likelihood of depression, generalized anxiety, Posttraumatic Stress Disorder (PTSD), and suicide ideation. In contrast, rumination was associated with an increased likelihood of depression, generalized anxiety, PTSD, suicide ideation, and complicated grief, even when demographic and bereavement-related factors were considered. Avoidance-focused coping was associated with an increased likelihood of depression, generalized anxiety, and PTSD. These findings persisted even when adjusting for sociodemographic and bereavement-related variables.

**Conclusions:** The coping strategies used by university students coping with sudden-death bereavement have a significant effect on outcomes. These findings confirm previous research, provide more insight into the unique needs of university students dealing with a sudden loss. The results also suggest that coping methods of the sudden-death bereaved be assessed following loss. Encouraging adaptive coping strategies could lower the risk of severe psychological

problems, and also, provide the foundation for subsequent interventional studies in this group of at-risk bereaved students.

### **Introduction**

Bereavement is a common stressor among university students (Balk, Walker, & Baker, 2010) with the sudden death of a loved one being one of the most commonly experienced traumatic events in this population (Frazier et al., 2009). Although the loss of a loved one is often a life-impacting event, losing a loved one suddenly, unexpectedly, or in a traumatic manner is associated with significant challenges (Anderson, Marwit, Vandenberg, & Chibnall, 2005). Sudden-death bereavement is associated with higher excess mortality risk, as well as a host of mental health consequences, compared to those who are non-sudden bereaved (Bolton et al., 2013; Kristensen et al., 2014; Lindqvist et al., 2008; Séguin, Lesage, & Kiely, 1995; Sveen & Walby, 2008).

One such adverse mental health outcome is complicated grief (CG). CG is defined as an intense and prolonged grief reaction which contributes to incapacitation and distress (Stroebe et al., 2007; Shear et al., 2007). The severity of CG is associated with the suddenness of death (Fujisiwa et al., 2010; Goldsmith et al., 2008). CG is also highly dependent on the nature of the loss, with a prevalence of 22-78% in the aftermath of sudden death (Nakajima et al., 2012), compared to approximately 10% for deaths due to cancer and 5% for non-violent deaths due to other diseases (Nakajima et al., 2012). Therefore, university students who experience a sudden loss are more likely to experience CG (Schnider, Elhai, & Gray, 2007). Sudden-death bereavement is also associated with increased risk of other mental disorders including depression, anxiety, PTSD, and substance misuse (Hamdan et al., 2013; Melhem et al., 2008; Prigerson et al., 1997; Wilcox et al., 2010).

It is generally thought that CG stems from poor adjustment to the loss (Stroebe et al., 2007). The Integrative Risk Factor Framework developed by Stroebe and colleagues (2006)

highlights various factors that contribute to poor bereavement outcomes, one such factor being an individual's coping style. According to this framework, coping style likely mediates the relationship between attachment to loss and intrapersonal (e.g. personality factors, SES, gender) and interpersonal risk factors (e.g. social support, intervention programs) (Stroebe et al., 2006).

Based on Lazarus and Folkman's (1984) seminal work; there are multiple coping strategies for dealing with the various stressors associated with bereavement (Stroebe et al., 2007). For example, a child grieving a parent may be faced both with the primary loss of attachment figure, as well as secondary losses such as financial support. Therefore, in this situation, coping could involve managing the distress associated with the loss either by **active emotion coping** (e.g. seeking emotional support) or **avoidance-based coping** (e.g. distracting or numbing behavior) (Jaaniste et al., 2017). Coping could also involve **problem-focused coping** such as developing new skills, utilizing internal and external resources, and engaging in goal-oriented behavior (Carver et al., 1989; Jaaniste et al., 2017; Meert et al., 2001; Schnider et al., 2007; Stroebe & Schut, 2001).

Although individuals generally tend to gravitate towards certain coping styles over time (Marquez-Arrico, et al., 2015); effective coping includes evaluating both one's own coping resources and the situation at hand to select the appropriate coping strategy (Jaaniste et al., 2017). In the context of bereavement (Stroebe & Schut, 1999) suggested that individuals coping with grief oscillate between loss-oriented coping (appraising and processing the loss) and restoration-oriented coping (adapting to a new life with the deceased). As time passes, more effort should be given to restoration-oriented processes and failing to do so may make the individual more vulnerable to a CG response (Stroebe and Schut, 1999). In fact, expending more

effort on restoration-oriented coping was associated with better mental health outcomes (Wijngaards-de Meij et al., 2008).

Zuckerman & Gagne (2003) developed a five-factor model to determine how individuals cope with stress. The five coping responses outlined in the model are: a) **self-help** which involves prioritizing emotional well-being, b) **approaching** problems which involves taking a problem-solving or goal-setting approach, c) **accommodation or optimism** involves positive reframing of stressors, d) **avoidance** involves orienting away from the problem and engaging in denial, and e) **self-punishment or rumination**, which involves engaging in rumination and self-blame. Although not specific to loss, Zuckerman and Gagne (2003) discovered strategies such as self-help, approach, and avoidance were more adaptive and generally associated with better mental health outcomes. In contrast, avoidance and self-punishment were linked to poorer mental health outcomes (Brougham, Zail, Mendoza, et al., 2009). Grief can have an impact on the coping strategies used. A study of bereaved parents highlighted significant differences in preferred coping strategies to non-bereaved samples (Littlewood et al., 1991). In contrast, parents bereaved for longer than eighteen months employed similar coping strategies to the non-bereaved sample.

A study of 123 sudden-death bereaved undergraduates highlighted a strong positive correlation between avoidance-based coping and severity of CG and PTSD symptoms (Schnider et al., 2007). Persistent maladaptive avoidance behaviours complicate adjustment to a loss and can result in CG, by preventing resolution of grief (Shear et al., 2010). For the bereaved, avoidance may be used to manage distressing emotions associated with the death (e.g. avoiding previously enjoyed activities with the deceased) (Shear et al., 2010). This avoidance of emotion hampers the resolution of grief, and in turn, it can persist for long periods of time (Shear et al.,

2010). While some components of CG, such as excessive proximity-seeking to the deceased, often spontaneously resolve, grief-related avoidance is more difficult to assess and more resistant to change (Shear et al., 2010). Experiential avoidance is associated with CG (Murrell et al., 2018) as avoidance can interfere with processing the loss. Overuse of experiential avoidance as a coping strategy can contribute to loss-related pathology (Murrell et al., 2018). Rumination is another coping strategy that is characterized by persistent self-focused negative cognition, widely regarded as normative to grief (Janniste et al., 2017; Stroebe et al., 2017). Excessive rumination, however, is associated with the development of symptoms of CG (Boelen et al., 2003; Boelen, 2006; Boelen & Van den Hout, 2008, Van der Houwen et al., 2010). Two types of rumination have been outlined with regards to bereavement: depressive rumination and grief-rumination (Doering et al., 2018).

Depressive rumination focuses on grief-related depressive symptoms such as sadness and helplessness (Boelen et al., 2003; Boelen et al., 2006; Boelen and Van den Hout, 2008; Nolen-Hoeksema et al., 2008; Van der Houwen et al., 2010). During depressive rumination, the individual engages in passive pre- and post-loss comparisons (Doering et al., 2019). Unsurprisingly, depressive rumination impairs problem-solving behavior, interferes with seeking social support, as well as increases negative cognitions (Doering et al., 2018; Nolen-Hoeksema, 2001; Nolen-Hoeksema et al., 2004). Therefore, individuals who engage in depressive rumination are susceptible to higher levels of depression, anxiety, posttraumatic stress, and complicated grief symptoms (Eisma et al., 2013, 2014a, 2014b; 2015; Ito et al., 2003; Morina, 2011).

Grief rumination involves rumination on the causes of the loss, the consequences of the loss, and the emotions associated with the loss (e.g. yearning or anger) (Eisma et al., 2013;

Boelen et al., 2006; Boelen & van den Hout, 2008; van der Houwen et al., 2010). In grief rumination, thought content is focused on what could have been done to prevent the loss and alternative outcomes if the loss had been prevented. Thoughts also centre around the unfairness of the loss, as well as the bereaved and others' responses to the loss (Doering et al., 2018). Excessive grief rumination may prevent the individual from processing the permanence of the loss, impeding restoration-oriented coping and adjustment to the loss (Stroebe et al., 2007). In contrast, acceptance promotes resilience and is associated with better adjustment following a traumatic event (Thompson et al., 2011). However, an untimely and traumatic loss may make acceptance of the loss more challenging (Stroebe et al., 2006; 2007), and precipitate a complicated grief reaction (Stroebe et al., 2007; Eisma et al., 2017). However, rumination is not necessarily a maladaptive coping strategy, as individuals may use rumination coupled with reflection as a method of processing depressive emotions associated with the loss and engage in active efforts to overcome these symptoms (Doering et al., 2018).

In contrast to rumination and avoidance, coping strategies such as optimism and engaging in effective problem-solving are associated with more resilience in the face of bereavement-related stressors (Shear, 2012). Dispositional optimism involves generalized positive expectancies of the future (Carver et al., 2010). Dispositional optimism is associated with better adjustment to a wide range of physical, psychological and environmental stressors (Carver et al., 2010). Within a bereavement context, this involves the capacity to envision leading a meaningful life even after a life-altering loss (Janniste et al., 2017). Optimism is associated with better psychological adjustment to loss (Harper et al., 2013), less severe PTSD reactions, and appears to be protective against CG reactions (Harper et al., 2013).

Optimism may be associated with lower emotional distress following bereavement as it promotes hopefulness, problem-focused coping, goal-oriented action, and may help alleviate separation distress (Boelen et al., 2005; Dougall, Hyman, Hayward et al., 2001; Stein, Folkman, Trabasso, & Richard, 1997). Furthermore, optimism is a socially desirable trait (Janniste et al., 2007) and therefore may be linked to increased social support, an important factor in bereavement outcomes (Stroebe et al., 2006). In a study of bereaved adults (n=230), Boelen and colleagues (2006) examined CG and depression severity over fifteen months. Initially, optimism was inversely associated with both depression and CG. However, this effect did not persist longitudinally for CG.

Stroebe & Schut (1999) posit that bereavement is a process of adjustment where an individual must come to terms with a loss, adjust to a new identity (e.g. as a widow), and cope with the practical ramifications of the loss. Adjustment also involves engaging in some form of problem-solving behaviour (Janniste et al., 2007). Individuals with CG experience more difficulties in problem-solving (Maccallum & Bryant, 2010). However, it is unclear whether problem-solving difficulties directly contribute to difficulties coping with grief or whether these difficulties are a result of a prolonged grief reaction (Reid & Dixon, 2000).

### **Aim of the Current Study and Limitations of Previous Research**

University students are faced with multiple stressors (Balk et al., 2001; Balk et al., 2010). A major stressor such as bereavement can have significant repercussions on students' health and academic outcomes, and therefore influence the trajectory of their lives (Balk, 2001; Balk et al., 2010). Unfortunately, little is known about how university students cope with bereavement, especially when it is sudden and unexpected. The few studies that have been conducted did not distinguish between sudden and non-sudden bereavement (Balk et al., 2001). Moreover, many



studies are focused on suicide and violent deaths (Bolton et al., 2013). There is significant evidence to suggest that even sudden natural deaths such as cardiac events could have negative emotional and physical repercussions on the bereaved (Ingles et al., 2016).

To our knowledge, there are no other studies that specifically focus on sudden death bereavement in the university student population, including deaths from sudden natural causes; which is an important gap in the literature. Additionally, little research has examined coping in this population, within the context of bereavement. Therefore, the purpose of the present study was to explore the mental health outcomes experienced by sudden death bereaved university students and their relationship to coping mechanisms in bereavement.

Using Zuckerman and Gagne's (2003) model of coping, we examined the relationship between adaptive and maladaptive coping, and mental health outcomes, among sudden death bereaved students. Based on existing literature with bereavement (Boelen et al., 2003; Schnider et al., 2007), we hypothesized that maladaptive coping (e.g. rumination, avoidance) would be associated with less favourable mental health outcomes. In contrast, we hypothesized that more adaptive coping strategies such as optimism and problem-solving would be associated with better mental health outcomes (e.g. depression, generalized anxiety, suicide ideation, PTSD, and complicated grief).

## **Method**

### **Participants and Procedures**

599 sudden-bereaved undergraduate psychology students were recruited for an online study from a public university in Canada. Recruitment was conducted between March 2017 to November 2018. Inclusion criteria were having lost a loved one (parent, sibling, extended family member, friend, or significant other) suddenly and unexpectedly within the preceding three

years. This study was approved by the Psychology Research Ethics Board at the University of Manitoba. The survey was administered online using Qualtrics software (Qualtrics, Provo, UT) and took approximately 90 minutes to complete. Survey questions included socio-demographic information, mental health questionnaires, and questionnaires on coping style and social support. Relevant information regarding bereavement was also collected, including duration of bereavement, relationship to the deceased and subjective closeness to the deceased. Students were awarded course credit for participation.

### **Questionnaires**

**The Patient Health Questionnaire (PHQ-9-item version).** The Patient Health Questionnaire (PHQ-9) rates the frequency of depressive symptoms over the past two weeks on a 0–3 Likert-type scale (‘not at all’ to ‘nearly every day’) (Spitzer et al., 1999) Cutoffs of 5, 10, 15 and 20 represented mild, moderate, moderately severe and severe depression respectively (Spitzer et al., 1999), with a maximum score of 27. The reliability of this scale is very good with studies reporting Cronbach’s alphas between 0.86 to 0.89 (Cannon et al., 2007; Diez-Quevedo et al., 2001; Kroenke & Spitzer, 2002). For the purposes of this study, we used the PHQ- scores as a dependent variable, comparing scores under five were compared to scores over five i.e. absence of clinically significant depressive symptoms compared to the presence of a clinically significant number of depressive symptoms.

In the PHQ-9 the question surrounding suicide ideation is a robust predictor of future suicidal behaviour (Rossom et al., 2017). We used this question to assess for suicide ideation in this population. Individuals who answered, “several days”, “more than half the days”, or “nearly every day” were classified as experiencing suicide ideation.

**The Generalized Anxiety Disorder Assessment -7 (GAD-7).** The GAD-7 is used to identify symptoms of generalized anxiety disorder rating the frequency of symptoms over the past two weeks on a 0-3 Likert-type scale ('not at all' to 'nearly every day'). With a maximum score of 21, cutoffs of 5, 10, and 15 represented mild, moderate, and severe anxiety, respectively (Spitzer, Kroenke, Williams, & Löwe, 2006). The reliability of this scale is 0.89 to 0.92 (Löwe et al., 2008; Spitzer et al., 2006), and it has been validated in both clinical and non-clinical populations. Similar to the PHQ-9, the GAD-7 inventory scores were used as a categorical variable due to the cutoff criteria. Scores under five were compared to scores over five i.e. absence of clinically significant anxiety symptoms compared to the presence of a clinically significant number of anxiety symptoms.

**The National Stressful Events Survey PTSD Short Scale (NSESS).** The National Stressful Events PTSD Short Scale (Kilpatrick et al., 2013) was used to assess symptoms of PTSD. The scale measures the severity of posttraumatic symptoms over the previous week on a nine-item Likert Scale ranging from 0 (*not at all*) to 4 (*extremely*). The scale has a high reliability with Cronbach's alpha of 0.901. The convergent and discriminant validity are within acceptable limits when compared to more established, measures of PTSD (Le Beau, Mischel, Resnick et al., 2014). The average total score is calculated on a 5-point scale ranging from none (0), mild (1), moderate (2), severe (3), or extreme (4). For the purposes of our study, a categorical variable was created, separating scores under one to scores above one due to the cutoff criteria.

**The Alcohol Use Disorders Identification Test (AUDIT).** The AUDIT is a 10-item screening instrument that assesses the amount and frequency of alcohol intake, as well as problems related to alcohol consumption. A cutoff of 5 for females and a cutoff of 7 for males

were optimized as cutoffs for the university student population (De Martini & Carey, 2012). With a cutoff of five or six, the AUDIT has a sensitivity of 0.76 and specificity of 0.79 (de Meneses-Gaya et al., 2009). Cronbach's Alpha across studies ranged from 0.81 to 0.93 (de Meneses-Gaya et al., 2009). Given the different cutoffs for males and females for at-risk drinking behaviour, we used the scores on the AUDIT as a yes/no variable, with values over 5 for females associated with at-risk drinking, and values over 7 for males categorized as at-risk drinking (DeMartini & Carey, 2012). When someone chose not to self-identify regarding sex, the lower cutoff was used.

**The Inventory of Complicated Grief (ICG).** The Inventory of Complicated Grief (ICG) is a well-established scale used to assess complicated grief (Prigerson et al. 1995). Respondents rate the frequency of their emotional experiences regarding grief on a 5-point Likert scale ranging from "never", "rarely", "sometimes", "often" and "always". Scores higher than 25 are diagnostic for complicated grief (Prigerson et al., 1995). Cronbach's alpha for the ICG is reported as 0.94 (Prigerson et al., 1995). The ICG was used as a categorical variable due to the cutoff criteria, with scores under 25 compared to scores over 25.

**The COPING Inventory (R-COPE).** The R-COPE (Zuckerman & Gagne, 2003) is derived from the COPE inventory (Carver, Scheier, & Weintraub, 1989; Carver, 1997). It is a 40-term questionnaire that briefly assesses a person's method of coping. Answers are rated on a 4-item Likert scale ranging from *I haven't been doing this at all (1)* to *I've been doing this a lot(4)*. The scale targets five dimensions including self-help (e.g. "I try to let out my feelings"), approach/ problem-solving (e.g. "I make a plan of action"), accommodation/ optimism (e.g. "I try to be optimistic in spite of what's happening"), avoidance (e.g. "I quit trying") and self-punishment/ rumination (e.g. "I think about my problem constantly"). Subscale coefficient

alphas range from 0.70 to 0.90 (Zuckerman & Gagne, 2003). Each subscale was analyzed individually, and scores were treated as a continuous variable rather than categorical item

**Other information.** We also collected the following sociodemographic information: sex (male, female, other and prefer not to answer), age (under 25 versus over 25), and ethnicity (White, Hispanic, East Indian, East Asian, Middle Eastern or Egyptian, Afro-Caribbean, African, or Black Canadian). Information on income, including that from loans, bursaries, scholarships, work, and parental support, was also collected (<5000 to 60,000 and above).

Bereavement-specific information was also collected, including relationship to the deceased (nuclear family, extended family, significant other, friend), cause of death, time since death, and closeness of connection to the deceased (ranging from not close at all to very close).

### **Statistical Analysis**

To examine the association between coping and mental health outcomes, we conducted multivariate logistic regressions with the dichotomous mental health measures as outcome variables in the models and each coping strategy as a predictor variable. Control variables in the models included gender, age, ethnicity, relationship status, relationship to the deceased, time since death, and relationship to the deceased.

### **Results**

Table 1 provides descriptive characteristics of the sample. The mean age of the sample was 20.6 years (SD = 5.64). Approximately 33.4% of the sample were male, 65.6 % of the sample female, and 1.0% identified as 'other'. Most of the sample identified as being White (45.2%). With regards to relationship to the deceased, a significant proportion reported that the deceased was an extended family member (57.2%) or a friend (33.8%). The median time since death was approximately 24 months.

Table 1.

*Demographic characteristics of the sample.*

	n	%
<b>Age</b>		
18-23	520	7.4
24 and above	75	12.6
<b>Gender</b>		
Male	186	31.1
Female	407	67.9
Other	6	1.0
<b>Family Income</b>		
>9000	356	36.9
10,000-29999	308	32.0
30000 and above	81	8.4
<b>Ethnicity</b>		
White/European	473	49.1
Arab	21	2.2
Black/ Caribbean Islander	76	7.9
East and South East Asian	188	19.5
Indian Subcontinent	61	6.3
Hispanic/Latino	8	0.8
Other	77	8.0
<b>Relationship</b>		
Parent/ Sibling	45	4.7
Grandparents/ Extended Family	648	67.2
Friend	239	24.8
Significant other	17	1.8
<b>Duration of bereavement</b>		
1 year	265	27.5
1 to 2 years	188	19.5
2 to 3 years	248	25.7
3 to 4 years	199	20.6

\* $p < .05$ , \*\* $p < .001$ , \*\*\* $p < .0001$ <sup>1</sup>Percentages refer to column percentages

Table 2 outlines the differential effects of coping style in sudden death bereaved university students. Self-punishment, even when adjusted for age, sex, ethnicity, income, duration of bereavement, and quality of relationship to the deceased, was associated higher odds of depression ( $AOR^2 = 1.19$ , 95% CI: 1.15-1.23,  $p < .0001$ ), generalized anxiety ( $AOR^2: 1.18$ , 95% CI = 1.14-1.23,  $p < .0001$ ), CG ( $AOR^2 = 1.04$ , 95% CI: 1.00-1.07,  $p < .05$ ), and PTSD ( $AOR^2 = 1.18$ , 95% CI: 1.13-1.22,  $p < .0001$ ). Self-punishment was also associated with higher odds of experiencing suicide ideation ( $AOR^2 = 1.12$ , 95% CI: 1.07-1.15,  $p < .0001$ ).

Accommodation (optimism) was associated with decreased odds of depression ( $AOR^2 = 0.80$ , 95% CI: 0.73-0.88  $p < .0001$ ), generalized anxiety ( $AOR^2: 0.80$ , 95% CI = 0.75-0.85,  $p < .0001$ ), and PTSD ( $AOR^2: 0.85$ , 95% CI = 0.78-0.94,  $p < .001$ ). Accommodation was also associated with decreased odds of experiencing suicide ideation ( $AOR^2 = 0.77$ , 95% CI = 0.69-0.87,  $p < .0001$ ). These associations persisted even when adjusted for demographic correlates, as well as quality of relationship to the deceased and time since bereavement. The approach subscale was associated with lower likelihood of suicide ideation ( $AOR^2 = 0.87$ , 95% CI: 0.81-0.93,  $p < .0001$ ), even when adjusted for demographic and bereavement related factors.

Lastly; avoidance-based coping was associated with slightly increased odds of depression ( $AOR^2 = 1.05$ , 95% CI: 1.00-1.10,  $p < .05$ ), generalized anxiety ( $AOR^2 = 1.07$ , 95% CI: 1.02-1.12,  $p < .001$ ), and PTSD ( $AOR^2 = 1.08$ , 95% CI: 1.02-1.14,  $p < .001$ ), even when adjusted for the above-named correlates.

Table 2.

*Coping Style and Bereavement Outcomes among Sudden Death Bereaved Students*

	UOR (95% CI)	AOR <sup>1</sup> (95% CI)	AOR <sup>2</sup> (95% CI)
<b>Self-Punishment</b>			
Depression	1.17(1.13-1.21) ***	1.17(1.13-1.21) ***	1.19(1.15-1.23) ***
Generalized Anxiety	1.18(1.14-1.21) ***	1.18(1.14-1.22) ***	1.18(1.14-1.23) ***
At-risk Drinking	1.03(0.97-1.09)	1.03(0.98-1.10)	1.07(1.00-1.13)
PTSD	1.17(1.13-1.21) ***	1.17(1.13-1.21) ***	1.18(1.13-1.22) ***
Suicidal Thoughts	1.13 (1.08-1.15) ***	1.16(1.08-1.15) ***	1.12(1.07-1.15) ***
Complicated Grief	1.30(1.00-1.06) *	1.03(1.00-1.06) *	1.04(1.00-1.07) *
<b>Self-Help</b>			
Depression	0.99(0.96-1.03)	0.98(0.96-1.02)	0.99(0.95-1.02)
Generalized Anxiety	0.99(0.96-1.02)	0.98(0.95-1.01)	0.98(0.95-1.02)
At Risk- Drinking	1.03(0.97-1.09)	0.97(0.92-1.06)	0.97(0.89-1.05)
PTSD	1.01(0.97-1.04)	1.00(0.98-1.04)	1.00(0.97-1.04)
Suicidal Thoughts	0.97(0.94-1.01)	0.97(0.94-1.01)	0.97(0.93-1.01)
Complicated Grief	1.01(0.97-1.05)	1.01(0.97-1.05)	1.00(0.97-1.05)
<b>Accommodation</b>			
Depression	0.82(0.75-0.89) ***	0.81(0.74-0.86) ***	0.80(0.73-0.88) ***
Generalized Anxiety	0.81 (0.75-0.88) ***	0.81(0.75-0.88) ***	0.80(0.74-0.85) ***

*Continued on next page*



	UOR (95% CI)	AOR <sup>1</sup> (95% CI)	AOR <sup>2</sup> (95% CI)
At Risk- Drinking	1.04(0.92-1.18) ***	0.84(0.70-1.01)	0.83(0.68-1.01)
PTSD	1.33(1.27-1.40) ***	0.88(0.78-0.94) **	0.85(0.78-0.94) **
Suicidal Thoughts	0.79(0.72-0.88) ***	0.77(0.69-0.86) ***	0.77(0.69-0.87) ***
Complicated Grief	1.03(0.92-1.10)	0.99(0.91-1.09)	0.97(0.88-1.07)
<b>Approach</b>			
Depression	0.95(0.90-1.00)	0.95(0.90-1.00)	0.96(0.90-1.02)
Generalized Anxiety	0.95(0.90-1.00)	0.95(0.90-1.00)	0.95(0.90-1.00)
At Risk- Drinking	0.91(0.81-1.02)	0.92(0.82-1.04)	0.89(0.77-1.02)
PTSD	0.98(0.92-1.04)	0.98(0.92-1.04)	0.97(0.91-1.04)
Suicidal Thoughts	0.88(0.82-0.94) ***	0.87(0.81-0.93) ***	0.87(0.81-0.93) ***
Complicated Grief	0.99(0.93-1.05)	0.98(0.92-1.04)	0.97(0.91-1.03)
<b>Avoidance</b>			
Depression	1.08(1.02-1.17) **	1.06(1.02-1.11) *	1.05(1.00-1.10) *
Generalized Anxiety	1.07(1.03-1.12) **	1.07(1.02-1.12) **	1.07(1.02-1.12) **
At Risk- Drinking	1.04(0.95-1.14)	1.07(0.97-1.18)	1.06(0.95-1.18)
PTSD	1.09(1.04-1.15) ***	1.09(1.03-1.14) **	1.08(1.02-1.14) ***
Suicidal Thoughts	1.00(0.95-1.05)	0.99(0.94-1.04)	0.99(0.94-1.05)
Complicated Grief	1.05(1.00-1.10)	1.04(0.99-1.09)	1.03(0.98-1.09)

\* $p < .05$  \*\* $p < .001$  \*\*\* $p < .0001$

UOR. Unadjusted Odds Ratio

1 Adjusted Odds Ratio (age, sex, ethnicity, income)

2 Adjusted Odds Ratio (sex, ethnicity, income, duration of bereavement, relationship to the deceased, and closeness to the deceased)

### Discussion

The results of this study extend the findings of previous work and show that coping style is associated with several mental health outcomes in sudden-bereaved university students. Overall, avoidance and rumination were significantly associated with depression, anxiety, PTSD and suicidal thoughts. Consistent with our hypotheses and prior literature, accommodation (optimism) was inversely associated with depression and generalized anxiety (Boelen, 2002; Boelen et al., 2015), PTSD (Wagner, Knaevelsrud, Maercker, 2007; Birkeland, Blix, Solberg & Heir, 2017) and suicide ideation (Hirsch, Conner, Duberstein et al., 2007).

Optimism does not appear to affect symptoms of CG. These results appear to lend support to the distinction between CG and depression (Boelen, 2015; Shear et al. 2007; Prigerson et al., 2009; Maercker et al., 2010). Our measure of coping also assessed dispositional rather than situation-specific optimism. Dispositional optimism promotes hopefulness, problem focused coping, goal-oriented action and may help alleviate separation distress (Boelen et al, 2002). Consequently, dispositional optimism could have an impact on symptoms of depression, anxiety, and PTSD (Boelen et al., 2002). However, optimism was not associated with symptoms of CG. In bereavement, the individual may be able to problem-solve secondary stressors associated with the loss but the loss itself is permanent. When a loved one dies after a long and prolonged illness, the bereaved may mourn the loss but take comfort in the cessation of suffering in the deceased. However, even a generally optimistic individual may have difficulty exercising situational optimism in the face of a sudden and unexpected loss. Therefore, optimism may have little effect on the grief response, which may explain why optimism had a protective impact with regards to other psychological disorders but not on CG.

Rumination (self-punishment) was associated with negative mental health outcomes, which is in keeping with our hypotheses and the current literature. Individuals who engage in rumination often have poorer outcomes with regards to depression, anxiety, PTSD, and CG (Eisma et al., 2017; Morina, 2011). Although some rumination after loss is normal (Stroebe et al., 2007), excessive rumination involving either trying to confront or avoid the loss (Noelen-Hoeksema, 2001, Stroebe et al., 2007) could lead to maladaptive outcomes. In sudden-death bereavement, a traumatic or unexpected death is often associated with an external locus of control (Rubinstein, 2004; Neria & Litz, 2007), which in turn is associated with increased rumination (Abdolmanafi et al., 2011). Stressful, unpredictable life events of any kind can also alter locus of control (Nowicki et al., 2018). Therefore, a shift towards an external locus of control after a sudden and traumatic bereavement could potentially spill over into other areas of students' lives (Rubinstein, 2004). It could also contribute to using negatively-valenced rumination as a way of meaning-making to cope with the uncertainty (Kamijo, 2018).

Sudden or unexpected death could also interfere with a student's ability to make meaning of the event due to the 'just world belief' (Stroebe, 2015; Stroebe et al., 2017). The just-world belief posits that good things happen to good people. An event such as a sudden, unexpected death can interfere with that world view (Stroebe, 2015), contributing to either intrusive or deliberate rumination (Kamijo & Yukawa, 2018), which is present in both CG and PTSD (Stroebe et al., 2017; Kamijo & Yukawa, 2018).

Avoidance-based coping was associated with slightly increased odds of depression, generalized anxiety, and PTSD. This supports previous literature linking avoidance-based coping with depression (Ottenbriet & Dobson, 2004; Hayes et al., 2004; Berking et al., 2009) and anxiety (Roemer et al., 2005; Lee et al., 2011); as well as with PTSD symptom severity

(Schnider et al, 2007). In fact, all gold-standard treatments for depression, generalized anxiety, or PTSD involve targeting avoidance-related behaviours, either through behaviour activation (Jacobsen et al., 2001) or exposure-based treatment. Effective treatments target both worry and PTSD related avoidance (Kazcurkin & Foa, 2015; Resick, Monson, et al., 2008) and therefore highlights the maladaptiveness of consistent use of avoidance-based coping responses. Unfortunately, there is evidence to suggest that avoidance is a heavily used coping strategy among university students when faced with stressors (Brougham et al., 2009), and this pattern may extend to bereavement.

With regards to CG, despite evidence to suggest that avoidance can hamper the processing of loss-related emotions (Shear, 2007) and contribute to increased detachment and numbness (Boelen et al., 2006), our study did not show any association between avoidance related coping and CG in bereaved university students. Prior research suggests that, among individuals with complicated grief, avoidance is generally more strongly correlated with the anxiety and mood-related symptoms of CG, rather than with yearning or longing (Baker et al., 2016). However, our study did not distinguish between the different symptoms of CG, which may also explain our pattern of results.

Previous research demonstrated an association between type of loss and avoidance related behaviours. Avoidance was utilized most strongly when the cause of death was a short illness, followed by suicide, homicide, more prolonged illness, and accidents (Baker et al., 2018). This difference in use of avoidance could explain our pattern of results, as this prior research demonstrates there is no consistent association between sudden losses and avoidance.

Prior research has also pointed to significant differences in coping strategies in the bereaved and non-bereaved population (Cousins, Servaty-Seib & Lockman, 2017). We did not

have a comparison sample of non-bereaved students, nor did we compare sudden-death bereaved to non-sudden bereaved students, which does limit the conclusions that can be drawn. There is evidence to suggest that avoidance is a mediator between rumination and negative grief reactions, and the lack of a formal mediational analysis limits the conclusions that can be drawn (Eisma et al., 2013).

Furthermore, using a non-specific measurement of coping, may have also contributed to this pattern of results, given previous research highlighting differences in coping between bereaved and non-bereaved students (Cousins et al., 2017). A more specific measure, such as the reliable and valid Grief-related Avoidance Questionnaire would have provided us with more insightful information on CG and avoidance-based coping (Baker et al., 2017; Shear et al., 2007). While our study provided information on more global aspects of coping, a global coping measure may not directly target coping in bereavement.

Avoidance in CG differs from avoidance in other disorders, specifically in that individuals engage in proximity-seeking to loved ones to an excessive degree. In this instance, they may be engaging in avoiding the reality of the loss, rather than avoiding reminders of the loss (Baker et al., 2017). This nuanced differentiation was not present in our study and therefore, could explain the lack of correlation between avoidance-based coping and CG. Complicated grief therapy highlights and addresses this dichotomy (e.g. the desire to avoid and excessive proximity-seeking) by incorporating elements of engaging in the loss, as well as distracting by engaging in pleasurable activities (Shear et al., 2014).

Shear (2012) highlights the importance of effective coping strategies associated with the loss. Normal bereavement involves assimilating the loss into one's cognitive framework so that

one is no longer excessively triggered by the loss, and the memories that remain are usually “bittersweet and in the background” (Shear, 2012; pg 122)

**Strengths and limitations.** The results from our study should be interpreted with the following limitations in mind. All our data were based on self-report measures. Therefore, the extent to which symptoms were directly caused by sudden-death bereavement is unclear. Reported symptoms could be due to pre-existing experiences (Boelen et al., 2015). Also, university students are faced with constant stress, with over 50% of students reporting more than average levels of stress (American College Health Association, 2019), relative to the general population. Therefore, the self-reported coping styles may be rooted in habitual coping rather than coping with bereavement per se. Due to variations in time of data collection (e.g. students are likely to report more stress closer to exams), as well as variations in time since bereavement, we may not have accurately captured coping style. Additionally, our study was not designed to examine variations in coping at two-time points (pre-and post-loss). Future studies that examine changes in coping pre-and post-loss would be beneficial.

Notwithstanding these limitations, the current findings suggest that coping style is significantly associated with depression, generalized anxiety, PTSD, CG, and suicide ideation in sudden bereaved university students. Even in the general university student population; coping strategies are an area of concern among university students, especially because they tend to favour certain maladaptive coping styles (Brougham et al., 2009).

Compared to the general population university students are a population vulnerable to mental disorders; and are at increased risk for anxiety and depressive disorders, as well as substance use disorders (Dennhardt & Murphy, 2013; Ibrahim, Kelly, Adams, & Glazebrook, 2013; Kessler et al., 2007; Stallman, 2008). Suicidal thoughts and behaviours are also highly

prevalent among this age group (American College Health Association, 2019; Auerbach et al., 2016; Eisenberg, Gollust, & Hefner, 2007; Eskin et al., 2016; Stallman, 2008). Furthermore, the traumatic or unexpected death of a loved one is frequently reported among this population (Frazier et al., 2009). Their increased vulnerability and exposure to sudden-death bereavement highlights the need for further research into the mental health of sudden death bereaved university students. While preferred coping styles are generally stable over time (Marquez-Arrico, Benaiges, Adan, 2015) there is evidence to suggest that psychosocial interventions may help individuals to select more adaptive responses (Steinhardt & Dolbier, 2010). Our research demonstrates that adaptive coping skills may help mitigate the effects of the loss, leading to better outcomes.

**Implications for policy and practice.** Among other factors, students may not use adaptive coping due to lack of awareness. Providing psychoeducation through multiple formats on adaptive coping may be a low-barrier way of increasing the resilience of students. Additionally, with regards to bereavement, raising awareness of the effect of sudden bereavement, as well as the symptoms of pathological grief reactions, may encourage students to seek support, and cope better with sudden death bereavement.

Coping style is an area that is amenable to change through appropriate intervention and should be considered when working with bereaved students (Cousins et al., 2017). Interventions that promote utilization of more adaptive coping skills, relevant to the stressor at hand, could contribute to better outcomes (Cousins et al., 2017; Dolbier et al., 2010). Providing effective treatment targeted at the loss, such as Complicated Grief Therapy (CGT), could be helpful (Shear et al., 2005; Wetherell, 2012).

**Future directions.** Future research examining the long-term effect of coping styles on sudden death bereavement would be beneficial, as well as changes in coping style post-loss. Additionally, examining coping style and sudden bereavement in the general population would extend the generalizability of our findings. Our study did not examine coping style specifically in the context of grief, which would provide more insight into coping post-loss. Further research on psychosocial interventions targeted at increased adaptive coping in sudden bereaved students would significantly add to the literature in this area.



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### **Chapter Five: General Discussion**

This research aimed to identify the effects of sudden-death bereavement on university students. While sudden-death bereavement is not a unique phenomenon, it is a vastly understudied area. This discussion contextualizes the findings within the Integrative Risk Factor Model of Bereavement. The overarching aim of this dissertation was to examine the impact of sudden-death bereavement in university students. I will also discuss the strengths and limitations of this body of research, as well as implications for treatment and policy decisions.

In Study 1, we assessed the prevalence of sudden-death bereavement in university students and compared the outcomes of sudden-death bereaved university students to those that had lost a loved one through general or non-sudden bereavement. Amongst our sample, sudden-death bereavement was quite prevalent, and 62% reported being bereaved through sudden rather than non-sudden means. With regards to mental health, there were no significant differences in mental health symptomatology (depression, anxiety, PTSD, suicide ideation, at-risk drinking) of the general bereaved, compared to the sudden-death bereaved students. However, sudden death bereaved students were more likely to report CG; even when bereavement related factors and sociodemographic factors were considered.

In Study 2, we examined help-seeking behaviour in sudden-death bereaved students. Unquestionably, sudden-death bereavement is a stressor that could contribute to increased vulnerability. Results from Study 2 demonstrated the positive association between poor mental health (PTSD, CG, suicidal thoughts, psychiatric comorbidity) and perceived need for care. Among sudden death bereaved university students, students who had lost a parent or sibling more likely to seek help compared to those who had lost extended family or friends. Individuals who reported depression, generalized anxiety, PTSD, suicidal thoughts, and psychiatric

comorbidity, based on their self-report were more likely to have sought help. Furthermore, depression, generalized anxiety, PTSD, and suicidal thoughts were associated with mental-health help-seeking.

In Study 3, we examined the coping style among sudden-death bereaved students. As bereavement is a significant stressor, strategies used by sudden bereaved university students to cope with stress were examined in association with the presence of mental health conditions. This study was contextualized within Zuckerman and Gagne's (2003) model of coping, Adaptive coping skills such as approaching situations with optimism (approach) were associated with a lower likelihood of mental disorders such as depression, generalized anxiety and PTSD. Conversely, engaging in maladaptive coping strategies such as rumination and avoidance were associated with an increased likelihood of these mental health conditions, even after adjusting for demographic and bereavement related factors.

These results highlight the unique needs of sudden-death bereaved students. While the loss is a significant stressor; to lose a loved one suddenly and unexpectedly, is associated with more significant distress and more negative outcomes. University is a period of substantial role transition. Therefore, a loss during this time, coupled with insufficient support, could significantly impact the trajectory of a student's life (Balk et al., 2009; 2010).

### **Findings in the Context of the Current Literature**

**Sudden death bereavement and CG.** Sudden death bereaved students are coping with high levels of grief, consistent with the literature suggesting that CG tends to occur when the death is traumatic, sudden and unexpected (Shear et al., 2012). CG can persist for several years after the loss (Stammel et al., 2013) In general, the closer the relationship to the deceased, the more likely an individual is to experience CG (Fujisawa et al., 2010). Unfortunately, due to a

lack of awareness, many individuals experiencing CG may not be receiving appropriate treatment or support. In fact, individuals experiencing CG report relief once they receive a diagnosis (Johnson, First, Block et al., 2009). CG is not a diagnostic entity unto itself and Prolonged Complex Bereavement Disorder currently only exists in the appendices of the Diagnostic and Statistical Manual of Mental Disorders (APA, 2013), thus contributing the lack of awareness surrounding the condition. It is possible that not many individuals or clinicians are aware of CG and its effects likely due to a narrative that all grief is normal and natural.

The most recent edition of the International Classification of Diseases for Mortality and Morbidity Statistics (2018) included Prolonged Grief Disorder (PGD). Criteria for PGD in the ICD-11 (2018) include 1) Excessive longing for or preoccupation with the deceased, 2) intense emotional pain, and a time and impairment criterion (i.e. persisting for more than six months post-loss, and contributing to significant functional, social and occupational impairment).

The criteria for Pervasive Complex Bereavement Disorder (PBCD) in the DSM-5 PCBD and ICD-11 PGD are somewhat similar. Both criteria highlight separation distress and use six months as a marker of extended grieving. Yet there are some differences in the criteria, e.g. a wish to die to be with the deceased (as highlighted by Boelen et al., 2019). Furthermore, PBCD in the DSM-5 has more symptoms, whereas the PGD criterion may leave more to clinical judgment (Keeley et al., 2016). These different criteria contribute to different prevalence rates of PBCD (6.4%) compared to PGD (18.0%) and PBCD criteria and differences in predictive validity (PBCD) (Boelen et al., 2018).

However, the ICD-11 criteria have demonstrable global clinical utility. In one study, clinicians were able to distinguish PGD from a normal grief response based on the ICD-11 diagnostic criteria (Keeley et al., 2016). There needs to be more research into the diagnostic

criteria of PBCD and PGD to create a more unified approach to diagnosis which would likely increase research into this understudied area and therefore access to care.

In our sample, sudden death bereavement was quite prevalent. The relationships students reported with the deceased also varied; ranging from a close family member (e.g. a parent) to a friend. Students also appeared to be affected by complicated grief even up to four years later, suggesting the need for more longitudinal research in this area. With regards to prior literature, our findings confirmed that individuals experiencing sudden-death bereavement are more likely to experience CG (Bolton et al., 2013). However, our results did not support prior research that sudden death bereavement makes you more vulnerable to mental illness, over and above general bereavement. University students are a population at risk of mental illness, and therefore mental disorder may be highly prevalent in this population, thus making small changes in rates of mental illness difficult to detect.

CG has a high comorbidity rate, and approximately 36-55% of individuals with CG also have depression (Shear, 2012). However, there is distinct symptomatology associated with CG (Shear et al., 2005). Therefore, CG requires targeted treatment, and effective and focused treatment can lead to an alleviation of both depressive and CG symptoms in individuals with comorbid CG and depression (Shear et al., 2005; Reynolds et al., 1999). However, treatment of depression alone does not contribute to symptom mitigation (Shear et al., 2005; Reynolds et al., 1999). There is a need for clear, distinct criteria for CG symptoms, so professionals can identify and provide targeted and effective treatment. In our sample, several students experienced comorbid symptoms, and comorbidity in itself was associated with poorer outcomes.

Comorbidity of mood, anxiety, and PTSD was associated with a perceived need, and any help-seeking behaviour; suggesting psychological distress (Motjabai, 2002). A sudden

bereavement can be termed a “critical incident” (Mitchell et al., 2003). It can disrupt an individual’s sense of control in their surroundings (Mitchell & Everly, 1995), thus contributing to feelings of anxiety (Shear, 2013). As many as 40% of individuals may develop an anxiety disorder during the first year of bereavement (Jacobs et al., 1990). Anxiety sensitivity, the tendency to experience physiological symptoms of anxiety as catastrophic, is correlated with CG and could contribute to the presence of CG symptoms (Robinaugh et al., 2014). Therefore, CG is also likely to be comorbid with anxiety, and predisposition to an anxiety disorder could increase the likelihood of developing CG. In our study, generalized anxiety disorder was not significantly associated only with sudden death bereavement. However, there is ample evidence that anxiety is a relatively common concern amongst university students (Giamos et al., 2013) therefore, it is likely that experiencing an unexpected sudden death can exacerbate the symptoms of anxiety.

Horowitz and colleagues (1997) conceptualized both CG and PTSD under the category of stress response syndromes, which are disorders triggered by stressful events. Both CG and PTSD also share overlapping symptom domains, including intrusive thoughts and yearning (Shear et al., 2013). However, the intrusive thoughts related to PTSD are associated with painful memories of the trauma. In contrast, the yearning associated with CG involves unfulfilled wishes, described as “permanent memory states” (Maercker & Znoj, 2010, p2). Shear (2013) notes that, with PTSD, the memories are often negative, whereas with CG the memories incorporate both positive and negative elements. In our sample, there were no differences among sudden-death bereaved students and non-sudden death bereaved students with regards to PTSD symptoms; however, sudden-death bereaved students were more likely to experience CG. This result is likely because we did not separate bereavement from traumatic deaths with bereavement from sudden natural deaths, the former being more likely to contribute to PTSD symptoms. The

comorbidity of CG and PTSD in those bereaved by violent deaths can be as high as 43%, and prior research suggests that the severity of these conditions is positively correlated with the violence of the death (Nakajima et al., 2002). In our sample, there was significant overlap between CG symptoms and other mental health conditions among sudden-death bereaved students; however, these patterns did not remain in the adjusted models. We did not examine symptom severity, which is an important consideration for future research.

Stressful life events can be triggers for substance use (Keyes et al., 2011) and CG symptoms tend to activate the nucleus accumbens, a part of the brain that plays a role in addiction. (O'Conner et al., 2008). Therefore, stress may impact addiction, especially in individuals who experienced a traumatic loss (Masferrer et al., 2016). In our sample, sudden death bereavement was not associated with alcohol use over and above general bereavement. However, this may be because our sample consisted of university students who generally report high levels of at-risk drinking, (DeMartini & Carey, 2012), and we did not examine the severity of alcohol use.

**Sudden-death bereavement, perceived need and help-seeking.** Among our sample of sudden-death bereaved students, more than 50% reported a self-perceived need for care. However, few students followed through with accessing resources (28% of the sample). Self-reported barriers to care included a lack of access to resources, stigma, competing commitments, and poor availability of services, also consistent with prior literature (Downs et al., 2012). These barriers to care are especially concerning given the several associated negative outcomes from sudden-death bereavement (Bolton et al., 2013).

Across our sample, demographic factors did not play a role in the self-perceived need for care. These results are inconsistent with previous literature which suggests that

women and younger individuals are more likely to report perceived need (Katz et al., 1997; Rabinowitz et al., 1999). However, we did not find any associations between perceived need and demographic factors. Demographic factors did play a role in mental-health help-seeking with Black students less likely to seek mental-health help compared to White students. Demographic factors may not play a role in the distress that students are experiencing but may influence resources available to them and intentions to seek help. For example, due to structural vulnerabilities (e.g. racism), young Black Canadians may be both an at-risk population and a population that experiences significant barriers to help-seeking e.g. stigma (Khenti, 2014). Demographic factors can interact with each other in complex ways, and future research should examine help-seeking within an intersectional context, rather than individual variables, which may not accurately reflect an individual's life experience.

Kinship relationship to the deceased was associated with any help-seeking behavior; although it was not associated with a perceived need for care. Consistent with prior literature (Young et al., 2012), our pattern of results suggests that non-kin also experience significant bereavement distress. However, they are not seeking help. Compared to kinship bereavement, non-kinship bereavement is associated with less support and understanding (e.g. non-kin are generally not afforded bereavement leave). Therefore there may be less motivation to seek help and fewer resources available (e.g. grief support groups for the loss of a friend).

Depression, generalized anxiety disorder, PTSD, and suicidal ideation were positively associated with a perceived need, any help-seeking behaviour, and mental-health help-seeking behavior. Psychiatric comorbidity was also associated with any help-seeking behaviour. Previous

literature suggests that increased symptomatology is associated with help-seeking behaviour (Eisenberg et al., 2007). PTSD has significant physical and mental health comorbidity (Boscarino et al., 1997; O'Toole et al., 2009), contributing to more functional impairment. Thus, based on previous literature (McLeay et al., 2017), it is likely that these students are more distressed and thus perceive a need for care. Furthermore, among certain populations, there may be less stigma associated with seeking help for PTSD compared to other disorders (Mittal et al., 2013).

Complicated grief was associated with perceived need but not with any help-seeking. While bereaved university students recognize the need for help, there may be a lack of awareness about treatment options for CG or a preference to seek help from more informal means (Provini, Cynthi, Everett, & Pfeffer, 2000). Awareness of resources and risk factors has previously been correlated with help-seeking and facilitative peer-support (Kalkbrenner & Hernandez, 2016). Therefore, in addition to educating students about pathological grief reactions, they should also be educated about formal interventions that may be beneficial (e.g. Complicated Grief Therapy) as well as educated about mental health in general. This education could take the form of raising awareness about risk factors for poor mental health and increasing students insight into the different forms of help available, and how to access this help.

Unfortunately, even among those who seek help, help-seeking is not without its challenges as many university students often report ignorance regarding how best to help their grieving counterparts (Balk, 1997). In fact, in a university environment, students may be away from their usual support network of family members. Students in our sample also cited a preference to seek help from more informal means, i.e. by relying on their family and friends. In times of stress, university students generally prefer approaching their peers for support



(Eisenberg et al., 2007a). However, their peers may not be able to provide constructive help or empathy to the grieving student (Balk et al., 1997).

Given that many university students are coping with the loss of a loved one (Balk et al., 2001; Servaty-Seib & Hamilton, 2006) university administration should make more efforts to familiarize students with the psychological and emotional processes associated with mourning (Hardison et al., 2005). Alongside raising awareness of normative grief reactions, free or low-cost access to professional support on campus is recommended, to encourage distressed students to seek help. Creation of grief support groups on campus may normalize seeking help for grief-related concerns. Aside from providing support to students, the group facilitators may be uniquely positioned to assess for more complex bereavement reactions and provide additional support as necessary. Integrating these services with other commonly accessed university spaces (e.g. the campus medical clinic, residences, the student union centre) may make these services more visible and attract students that may not be inclined to seek professional help (Reilly, 2018). More research is needed to determine if this helps reduce stigma and normalize help-seeking behaviour.

Students in our sample reported a preference to rely on family and friends for support. Investing in training students to provide empathic and non-judgmental support to grieving peers may increase access to care. Individuals experiencing a sudden death bereavement may not have the capacity to assemble a support system on short notice (Frost et al., 2017). Emerging evidence from tertiary care settings suggests that receiving support from trained peers can help reduce hospitalization and improve quality of life (Coatsworth-Puskopy et al., 2006). However, universities may be reluctant to devote resources to programs without demonstrable effectiveness; therefore, more research is needed into the effectiveness of peer support programs

for grieving students.

Also, providing information and support in multiple formats can increase access to care. Recent data suggests that even online support can have buffering effects on post bereavement major depressive disorder, CG, PTSD, and quality of life (Vanderwecker and Prigerson, 2004). Providing access to care through electronic means may decrease waiting times and may increase the number of students that can be reached. It may also act as a low-barrier first step for students that are reluctant to seek more formal help.

Balk (2001) recommended the creation of ‘campus bereavement centres’ to provide care and conduct much-needed research into the needs of grieving university students. These campus bereavement centres would provide structured, evidence-based interventions to meet the needs of bereaved university students. Furthermore, bereavement is often accompanied by secondary stressors (e.g. loss of financial support). Besides providing psychological and emotional support, another use for the campus bereavement centre could be to assist the bereaved student with other associated challenges, for example, obtaining additional financial support, and meeting academic requirements. This support would help alleviate some of the stressors associated with bereavement and is in line with Balk (2011)’s holistic model of bereavement. In our sample approximately 60% of students that were bereaved reported sudden death bereavement. Student bereavement is an understudied area, and more information on prevalence and effects of bereavement would provide more support for health service development regarding bereavement. Currently services for bereaved university students are limited and more needs to be done for these students (Fagjenbaum et al., 2012).

With regards to more professional mental health support, raising awareness about pathological grief reactions is necessary. CG symptoms are often comorbid with other

psychiatric symptomatology. If not assessed properly, there is a possibility that the grief may be dismissed as normal and not enough care provided to the grieving student. Moreover, when CG is comorbid with other conditions, only treating the comorbid condition does not lead to symptom mitigation (Shear et al., 2005; Reynolds et al., 1999). A small pilot study suggested that SSRIs can contribute to the alleviation of CG symptoms even in the absence of psychotherapy (Simon et al., 2007). This treatment may be a viable option for individuals who do not have the resources to seek long term mental-health care. Education of primary care providers in the symptoms of CG may help to reach more bereaved students.

**Coping style.** Grief is an active and ongoing attempt to confront a loss. Processing loss involves processing memories both before and after a loss, as well as working towards a detachment from the deceased (Stroebe & Schut, 1999). When death is traumatic and unexpected, processing the memories associated with the loss is more difficult and can lead to a prolonged and complicated grief reaction (Stroebe et al., 2006). Sudden death bereavement was highly prevalent in our study. However, not all individuals in our study who experienced sudden death bereavement went on to experience psychiatric symptomatology. The difference appears to be related to how individuals cope with the loss (Stroebe et al., 1999), and coping likely mediates the relationship between interpersonal and intrapersonal factors with adjustment (Janniste et al., 2017).

Coping styles are generally stable over time (Marquez-Arrico et al., 2015). However, effective coping involves utilizing the appropriate strategy for the situation at hand (Jaaniste et al., 2017). Within the context of bereavement, coping is especially difficult as the individual is coping both with the loss, as well as stressors surrounding the loss (Stroebe & Schut, 1999). In our study, we examined more adaptive coping strategies such as problem-solving and optimism,

as well as strategies such as rumination and avoidance. In general, more adaptive strategies were positively correlated with better mental health in sudden-bereaved students. These effects persisted even when bereavement and demographic factors were considered (Jaaniste et al., 2017).

Optimism was associated with lower depression, generalized anxiety and PTSD symptomatology but exerted no effect on CG consistent with prior literature (Boelen et al., 2015). This underscores the existence of CG as a diagnostic entity in itself (Boelen et al., 2015). It may also be difficult to maintain optimism in the face of a traumatic loss.

Rumination (self-punishment) was positively associated with depression, generalized anxiety, PTSD and CG symptomatology consistent with our hypotheses and the prior literature (Dar, 2015; Eisma et al., 2014; 2015a; 2015b; 2017; Papageorgiou & Wells, 2003; Morina et al., 2011). Ruminations are generally can strengthen the loss narrative because the memory is repeatedly re-consolidated (Millon et al., 2018). A stressful event may also alter an individual's locus of control and belief in a just world (Nowicki et al., 2019; Stroebe, 2015) thus contributing to intrusive or deliberate rumination, as a way of coping. Engaging in rumination coupled with minimal emotional processing, may lead to pathological bereavement outcomes (Noelen - Hoeksema, 2001, Stroebe et al., 2007). Some individuals are generally prone to engage in rumination, which appears to underlie several psychological disorders. While past research conceptualized rumination as a relatively stable trait, newer evidence suggests that effective intervention can target rumination (Millon et al., 2018).

In our study, students who engaged in avoidance-based coping were more likely to experience depression, generalized anxiety disorder, and PTSD symptom severity consistent with past findings (Lee, et al., 2011; Ottenbriet & Dobson, 2004; Schnider et al, 2007). Avoidance was

not associated with symptoms of CG in our study, which is inconsistent with the previous literature (Boelen et al., 2003). Prior research suggests that avoidance may contribute to certain symptom profiles of CG (Baker et al., 2016) which we did not assess separately in our study, and this is an area for future investigation. Avoidance is generally a heavily used coping strategy among university students and can contribute to significant impairment (Brougham et al., 2009). More research into the area of avoidance and its role in grief needs to be done. Our study was cross-sectional in nature, and we did not examine avoidance specifically within the context of grief, using a measure, such as the Grief Related Avoidance Questionnaire (Shear et al., 2007). Prior research has demonstrated differential coping responses in bereaved and non-bereaved students (Cousins et al., 2017). Therefore, future research needs to be conducted to understand avoidance specifically related to grief, to provide targeted treatment for bereaved individuals (Baker et al., 2016).

Resilience, the ability to navigate stressful situations is another factor that is associated with adaptive grief response (Schwartz et al., 2018). In order to develop resilience, active coping strategies can act as a buffer for pathological grief reactions when experiencing the loss of a loved one (Schwartz et al., 2018). In our study, we did not examine resilience, which is important to examine in an emerging adult population. Future research on posttraumatic growth after a loss would provide more insight into the mediating effect of adaptive coping on pathological grief reactions.

Clinical interventions can promote healthy and effective coping strategies, and therefore better outcomes (Dolbier et al., 2010). Complicated Grief Therapy is an effective therapy for symptoms of CG (Shear et al., 2005; Wetherell, 2012) and involves coming to terms with the death through a variety of loss-and restoration-oriented techniques (Wetherell, 2012). One

drawback of CG therapy is that it is a challenging technique to learn and requires a significant time investment (Wetherell, 2012), thus limiting the number of practitioners trained in CG. Furthermore, it is specific to CG; and while there is evidence to suggest that treatment of CG can alleviate symptoms of depression (Shear et al., 2005), there are other psychological disorders associated with sudden death bereavement. Therefore, more research in this area is warranted to provide effective, evidence-based care for the sudden bereaved.

### **The Integrative Risk Factor Model.**

The Integrative Risk Factor Framework (IRFF) (Stroebe et al., 2006) combines the Dual Process Model (Stroebe & Schut, 1999) and the cognitive appraisal model (Lazarus and Folkman, 1984). The IRFF provides a more in-depth analysis of bereavement outcomes by incorporating risk and protective factors for adaptive bereavement trajectories, including the circumstances surrounding the death, intrapersonal factors (e.g., personality factors, gender), interpersonal factors (e.g., family dynamics, spirituality), and coping factors. The incorporation of risk and protective factors in a single model potentially allows for the identification of individuals more likely to be at risk and, therefore, in need of additional support. The IRFF also provides a comprehensive theoretical framework for research. However, it is a complicated model and difficult to study in its entirety.

Our study provided support for the IRFF with regards to circumstances surrounding the death. Traumatic and sudden circumstances were more likely to contribute to complicated grief and negative psychological outcomes. Furthermore, our study also supported the model's relationship between appraisal, coping style, and psychological outcomes. For individuals who are at risk of poor bereavement outcomes (e.g., individuals experiencing sudden traumatic loss), seeking help or receiving support is classified as a protective factor (Schut et al., 2001; Stroebe et

al., 2006). In our study, we examined help-seeking. Sudden-death bereaved students were indeed seeking help, with increased distress associated with increased help-seeking. However, as delineated by Stroebe and colleagues (2006), the integrative risk factor framework needs to be reviewed, based on current research, with factors removed, added, and/or extended. Help-seeking, coping style, and interventions for grief are factors that may need to be extended within the Integrative Risk Factor Framework.

### **Strengths and Limitations of this Research**

In terms of limitations, our study was based on self-report instead of a clinical interview. This limited the information we had access to, and the extent to which symptoms were caused by sudden death bereavement is unclear. This study also targeted only a specific sector of university students (i.e. first-year psychology students) and therefore, their experiences may not be generalizable to other samples. Furthermore, the cross-sectional nature of the study limits the conclusions that can be drawn.

However, this is one of the few studies to examine sudden death bereavement in the university student population. The comprehensive and detailed survey, large sample size, and valid and reliable mental health measures provide us with unique insight into the experiences of the sudden death bereaved population.

### **Future Research**

As previously outlined, our study had a number of limitations that suggest future research directions. Firstly, in our study, we used the Inventory of Complicated Grief (ICG) which does not map on precisely to the DSM-5 diagnostic criteria of Pervasive Complex Bereavement Disorder (PBCD). More research needs to be conducted into the diagnostic criteria of CG in order to create a more amalgamated approach to diagnosis and treatment of this disorder as there

are significant differences between the ICD-11 Prolonged Grief Disorder, and the DSM-5 Persistent Complex Bereavement Disorder (Leferink & Eisma, 2018). These different diagnostic criteria and lack of consensus among the mental health community may mean that some individuals risk being underdiagnosed or over-pathologized. This may have repercussions for design and provision of effective treatments, as well as access to care. More awareness of the diagnostic criteria and effective therapies would be beneficial to provide support to individuals experiencing CG. More research into well-validated measures, as well as into differential diagnoses and comorbidity is an important area for future research.

Future research should also examine the generalizability of the findings on sudden-death bereavement in other populations (e.g. the military, war-affected populations, in the aftermath of natural disasters). Furthermore, a more in-depth examination of sudden-death bereavement outcomes over time would also shed more light on this under-researched area. A mixed-methods approach, e.g. an explanatory sequential approach to examining grief in this population would provide a unique insight into the experience of bereaved students. In our study, we used a few self-reported mental health conditions to examine the mental health of students. However, expanding the mental health conditions examined, as well as incorporating more formal assessment tools, e.g. a clinical interview, would provide more informed results.

A longitudinal examination of help-seeking and coping among bereaved university students is an important area for future research. With regards to help-seeking, obtaining a more comprehensive picture of barriers to care as well as exploring the effectiveness of novel treatment approaches (e.g. peer support, online interventions) would significantly add to the literature. While there are effective therapies for CG (Wetherell, 2012), more research on the benefits of these interventions for the sudden-death bereaved population is recommended. This



would increase our insight into whether sudden-death bereavement is an important consideration for treatment outcomes. Also, an examination of different treatment modalities (e.g. peer support, online interventions, individual therapy, group therapy) on treatment outcomes would provide more insight into effective and widely dispensable treatments.

In our study, coping style was associated with mental health; however, we did not examine coping style specifically in the context of coping with bereavement. Therefore, future longitudinal research examining specific bereavement coping strategies as well as long-term mental and physical health outcomes would provide valuable insight into this population. Future research should also examine whether an intervention targeted at developing effective coping skills after bereavement mitigates the effect of sudden-death bereavement on mental health outcomes.

In our study, we only examined first-year university students which limited our conclusions. Expanding the study to include a broader population of university students, including graduate students, is a potential consideration for future research. On a larger scale, a national examination of bereaved university students may provide significant insight into the unique needs of this population.

### **Summary Conclusions: What this Research Adds to Knowledge about Sudden Death Bereavement in University Students**

#### **Prevalence and Implications of Sudden Death Bereavement**

- Sudden death bereavement of a friend, significant other, family member or extended family member is a highly common stressor among university students.

- Sudden death bereavement is associated with an increased likelihood of complicated grief even when sociodemographic factors, time since death, closeness to the deceased and relationship to the deceased were considered (friend, significant other, parent, sibling, extended family member).

### **Perceived Need and Help-Seeking Behaviour Among Sudden Bereaved University Students**

- Very few sudden death bereaved students seek help, whether mental health help or otherwise, however, a significant proportion of students reported that they needed help.
- Complicated grief and comorbid mental health concerns were frequent and were associated with perceived need.
- Barriers to help-seeking included time constraints due to academic and work demands, stigma, discomfort with treatment, lack of confidence in the health care provider, lack of resources, and a preference to rely on family, friends, and spirituality.

### **Coping Style among Sudden Bereaved University Students**

- Coping style is associated with mental health conditions in sudden death bereaved university students.
- A generally optimistic way of coping is inversely associated with depression, generalized anxiety, and Post Traumatic Stress Disorder (PTSD) but not with complicated grief.
- Rumination (self-punishment) is associated with mental health conditions such as depression, anxiety, PTSD, and complicated grief, even when bereavement-related and demographic factors are taken into account.
- Using avoidance-based coping is associated with an increased likelihood of depression, generalized anxiety, and PTSD.

### **Recommendations for Policy and Practice based on the Findings**

- General workplace and academic policy often allows time off for kinship bereavement but does not necessarily take into account the closeness to the deceased. Therefore, extending the parameters of bereavement policies may be helpful.
- A re-examination of the policy around bereavement leave may be warranted, as the effects of complicated grief do not resolve in the weeks to months after the death.
- Individuals who experience the death of a loved one in a sudden and traumatic manner are likely to have poorer outcomes and therefore, may need additional help and support.
- Education of university governance, faculty, staff, and peers on the signs of complicated grief could do much to aid identification of students experiencing complicated grief.
- Providing information about resources available, specifically for grief, would likely promote help-seeking behaviour among bereaved university students.
- Educating students about complicated grief could help promote help-seeking, as bereaved students may recognize the symptoms which in turn may encourage them to seek help.
- Many university students prefer to approach their peers for support. Mobilizing and education peer support would be beneficial and could act as a stepping stone to accessing more formal resources as needed.
- When a death occurs in the university community, having counsellors on hand to assist grieving students would be beneficial.
- A trusted university representative should check in with bereaved students for at least six months after a death to gauge the students' wellbeing.
- Educating students on how to cope constructively with stress would be beneficial not only in coping with grief but also with day-to-day stressors.

- Recognize that nature of the relationship to the deceased does not automatically determine how a student is impacted by the loss.
- Provide evidence-based treatment for complicated grief, such as Complicated Grief Therapy (CGT) (Shear, 2010). While obtaining training and certification in CGT is time-consuming and labour-intensive, it would be beneficial to have at least one staff member trained in this area, given the prevalence of sudden death bereavement and CG in university students.
- Provide evidence-based support in multiple formats, (e.g. brief online interventions, face-to-face therapy) to increase access to care, preferably in a stepped-care model.

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**Appendix A**

## Questionnaires for Survey

*Part 1. Demographic and bereavement related questionnaires*

Please answer the following questions:

- 1) Sex
  - a. Male
  - b. Female
  - c. Other
  
- 2) Age (years) \_\_\_\_\_
  
- 3) Relationship Status
  - a. Married/ Common-Law
  - b. In a committed relationship
  - c. Single
  - d. Divorced
  - e. Widowed
  - f. Prefer not to answer
  
- 4) Ethnicity/ Race
  - a. Arab (West Asian)
  - b. Black (African nations and African Canadians)
  - c. Chinese (China, Taiwan, Japan, North Korea)
  - d. South-East Asia
  - e. East Indian
  - f. First Nations/Aboriginal
  - g. Caribbean Islands
  - h. Hispanic
  - i. White/European
  
- 5) Average annual income (including income from student loans, scholarships, support from family).
  - a. >5000- 9999
  - b. 10,000- 14,999
  - c. 15,000-30,000
  - d. 30,000 – 50,000
  - e. 60,000 and above
  - f. Other

- 6) Living situation
- Live in university residence
  - Live outside of university with roommates
  - Live with family
  - Live by yourself
- 7) During the past three years have you experienced the loss of a significant person In your life due to death
- Yes
  - No

*If you have experienced more than one loss please answer the following questions based on the loss you consider most significant and difficult.*

- 8) What was your relationship to the deceased?
- Mother
  - Father
  - Brother
  - Sister
  - Grandparent
  - Cousin
  - Aunt/Uncle
  - Close Friend
- 9) Was the loss expected or unexpected
- Expected
  - Unexpected
- 10) What was the cause of death
- Terminal Illness
  - Sudden Illness
  - Accident
  - Homicide
  - Suicide
  - Unsure
  - Other (please specify) \_\_\_\_\_
- 11) How long ago did the death occur (months) \_\_\_\_\_
- 12) My relationship with the deceased was:
- Very close
  - Close

- c. Close and not close at the time of death
- d. Not close
- e. Not close at all

13) Please indicate how this loss affected you academically during your current program, even if it occurred prior to your enrollment.

- a. Not at all
- b. A little bit
- c. Moderately
- d. Quite a bit
- e. Extremely

*The Inventory of Complicated Grief*

*Psychiatry Res* 1995; 59(1-2): 65-79. From: Prigerson HG et al. "Inventory of Complicated Grief: a scale to measure maladaptive symptoms of loss."

	Never (0)	Rarely (1)	Sometimes (2)	Often (3)	Always (4)
I think about this person so much that it's hard for me to do the things I normally do					
Memories of the person who died upset me					
I feel I cannot accept the death of the person who died					
I feel myself longing for the person who died					
I feel drawn to places and things associated with the person who died					
I can't help feeling angry about his/her death					
I feel disbelief over what happened					
I feel stunned or dazed over what happened					
Ever since he/she died, it is hard for me to trust people					
Ever since he/she died, I feel as if I have lost the ability to care about other people or I feel distant from people I care about					
I feel lonely a great deal of the time ever since he/she died					
I have pain in the same area of my body or have some of the					

same symptoms as the person who died					
I go out of my way to avoid reminders of the person who died					
I feel that life is empty without the person who died					
I hear the voice of the person who died speak to me					
I see the person who died stand before me					
I feel that it is unfair that I should live when this person died					
I feel bitter over this person's death					
I feel envious of others who have not lost someone close					

Scoring: Scores >25 is diagnostic for complicated grief



*The Patient Health Questionnaire (PHQ-9)*. Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine*, 16(9), 606–613. doi:10.1046/j.1525-1497.2001.016009606.x

	Not at all (0)	Several days (1)	More than half the days (2)	Nearly every day (3)
Little interest or pleasure in doing things				
Feeling down, depressed or hopeless				
Trouble falling asleep, staying asleep, or sleeping too much				
Feeling tired or having little energy				
Poor appetite or overeating				
Feeling bad about yourself — or that you are a failure or have let yourself or your family down				
Trouble concentrating on things, such as reading the newspaper or watching television				
Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual				
Thoughts that you would be better off dead or of hurting yourself in some way				

b) If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

0. Not difficult at all 1. Somewhat difficult 2. Very difficult 3. Extremely difficult

*Scoring:* Minimal depression (0-4), Mild depression (5-8), Moderate depression (10-14), Moderately Severe depression (15-19), Severe depression, (20-27)

*Generalized Anxiety Disorder Questionnaire (GAD-7)*. Spitzer, R. L., Kroenke, K., Williams, J. B & Lowe, B. (2006). A brief measure for assessing Generalized Anxiety Disorder. *Arch Intern Med* 166, 1092–1097.

	Not at all (0)	Several days (1)	More than half the days (2)	Nearly every day (3)
Feeling nervous, anxious, or on edge				
Not being able to stop or control worrying				
Worrying too much about different things				
Trouble relaxing				
Being so restless that it's hard to sit still				
Becoming easily annoyed or irritable				
Feeling afraid as if something awful might happen				

b) If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

0. Not difficult at all 1. Somewhat difficult 2. Very difficult 3. Extremely difficult

*Scoring:* Mild anxiety (5-9), Moderate anxiety (10-14), Severe anxiety (15>)

Kilpatrick, D.G., Resick H.S. & Friedman M.J. (2006). *National Stressful Events Survey PTSD Short Scale (NSSESS)*

People sometimes have problems after extremely stressful events or experiences. How much have you been bothered during the past two weeks by each of the following problems that occurred or became worse after an extremely stressful event/experience? Please respond to each item by marking one box per row.

	Not at all(0)	A little bit (1)	Moderately (2)	Quite a bit (3)	Extremely (4)
Having “flashbacks,” that is, you suddenly acted or felt as if a stressful experience from the past was happening all over again (for example, you re-experienced parts of a stressful experience by seeing, hearing, smelling, or physically feeling parts of the experience)?					
Feeling very emotionally upset when something reminded you of a stressful experience?					
Trying to avoid thoughts, feelings, or physical sensations that reminded you of a stressful experience?					
Thinking that a stressful event happened because you or someone else (who didn’t directly harm you) did something wrong or didn’t do everything possible to prevent it, or because of something about you?					
Having a very negative emotional state (for example, you were experiencing lots of fear, anger, guilt, shame, or horror) after a stressful experience?					
Losing interest in activities you used to enjoy before having a stressful experience?					
Being “super alert,” on guard, or constantly on the lookout for danger?					
Having a very negative emotional state (for example, you were experiencing					

lots of fear, anger, guilt, shame, or horror) after a stressful experience?					
Feeling jumpy or easily startled when you hear an unexpected noise?					
Being extremely irritable or angry to the point where you yelled at other people, got into fights, or destroyed things?					

**Scoring** = The average total score reduces the overall score to a 5-point scale, (0), mild (1), moderate (2), severe (3), or extreme (4).

*The AUDIT Questionnaire (5 minutes)*

Saunders JB, Aasland OG, Babor TF et al. Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption II. *Addiction* 1993,88: 791- 803)

How often do you have a drink containing alcohol?

- 0) Never
- 1) Monthly or less
- 2) 2-4 times a month
- 3) 2-3 times a week
- 4) 4 or more times a week

How many standard drinks containing alcohol do you have on a typical day when drinking?

- 0) 1 or 2
- 1) 3 or 4
- 2) 5 or 6
- 3) 7 or 9
- 4) 10 or more

How often do you have six or more drinks on one occasion?

- 0) Never
- 1) Less than monthly
- 2) Monthly
- 3) Weekly
- 4) Daily or almost daily

During the past year, how often have you found that you were not able to stop drinking once you had started?

- 0) Never
- 1) Less than monthly
- 2) Monthly
- 3) Weekly
- 4) Daily or almost daily

During the past year, how often have you failed to do what was normally expected of you because of drinking?

- 0) Never
- 1) Less than monthly
- 2) Monthly
- 3) Weekly
- 4) Daily or almost daily

During the past year, how often have you needed a drink in the morning to get yourself going after a heavy drinking session?

- 0) Never
- 1) Less than monthly

- 2) Monthly
- 3) Weekly
- 4) Daily or almost daily

During the past year, how often have you had a feeling of guilt or remorse after drinking?

- 0) Never
- 1) Less than monthly
- 2) Monthly
- 3) Weekly
- 4) Daily or almost daily

During the past year, have you been unable to remember what happened the night before because you had been drinking?

- 0) Never
- 1) Less than monthly
- 2) Monthly
- 3) Weekly
- 4) Daily or almost daily

Have you or someone else been injured as a result of your drinking?

- 0) No
- 1) Yes, but not in the past year
- 2) Yes, during the past year

Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested you cut down?

- 0) No
- 1) Yes, but not in the past year
- 2) Yes, during the past year

### ***Scoring***

**Total score cutoffs females (> 5 for females >7 for males)**

*The R-Cope*

Zuckerman, M & Gagne, M The COPE revised: Proposing a 5-factor model of coping strategies(2003) *Journal of Research in Personality*. 37(3)169-204.

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.

- 1 = I usually don't do this at all
- 2 = I usually do this a little bit
- 3 = I usually do this a medium amount
- 4 = I usually do this a lot

## Self-help

1. I take time to express my emotions.
2. I let my emotions show.
3. I try to let out my feelings.
4. I allow myself to show how I feel about things.
5. I discuss my feelings with someone
6. I try to get emotional support from friends or relatives.
7. I talk to someone about how I feel.
8. I talk to someone to find out more about the situation.

## Approach

9. I concentrate my efforts on doing something about it.
10. I take additional action to try to get rid of the problem.
11. I take direct action to get around the problem.
12. I do what has to be done, one step at a time.
13. I make a plan of action.
14. I try to come up with a strategy about what to do.
15. I think hard about what steps to take.
16. I try hard to prevent other things from interfering with my efforts at dealing with this.

## Accommodation

17. I try to be optimistic in spite of what happened.
18. I work on feeling positive no matter what.
19. I work on staying positive even when things look bad.
20. I get used to the idea that it happened.
21. I accept the reality of the fact that it happened.
22. I try to see it in a different light, to make it seem more positive.
23. I look for something good in what is happening.
24. I try to identify something else I care about.

## Avoidance

25. I say to myself "this isn't real."
26. I refuse to believe that it has happened.
27. I pretend that it hasn't really happened.
28. I admit to myself that I can't deal with it and quit trying.
29. I give up the attempt to get what I want.
30. I blame someone or something for what happened to me.
31. I accuse someone of causing my misfortune.
32. I try to forget the whole thing.

## Self-punishment

33. I blame myself
34. I realize I brought the problem on myself.
35. I criticize or lecture myself.
36. I see that I am at the root of the problem
37. I just think about my problem constantly
38. I return in my head again and again to what is troubling me.
39. I relive the problem by dwelling on it all the time.
40. I brood over my problem nonstop.



*Perceived need and barriers to mental health questionnaire**(Adapted from the CCHS- Mental Health Survey, 2012)*

During the past 12 months, did you receive the following kinds of help because of problems with your emotions, mental health, or use of alcohol or drugs?

- a) Information about these problems, treatments or available services
- b) Medication
- c) Counselling, therapy, or help for problems with personal relationships
- d) Other, please specify \_\_\_\_\_
- e) None

Thinking back to the help you received, you think you got as much of this help as you needed (during the past 12 months)?

- a) Yes
- b) No

If you did need more help or did not receive any help, what kind of help did you need more of?

- a) Information about these problems, treatments or available services
- b) Medication
- c) Counselling, therapy, or help for problems with personal relationships
- d) Other, please specify \_\_\_\_\_

Why didn't you get help during the past 12 months?

- a) You preferred to manage yourself
- b) You didn't know how or where to get this kind of help
- c) You haven't gotten around to it (e. g. too busy)
- d) Your job interfered (e.g. workload, hours of work, or no cooperation from supervisor)
- e) Help was not readily available
- f) You didn't have confidence in health care system or social services
- g) You couldn't afford to pay
- h) Insurance did not cover
- i) You were afraid of what others would think of you
- j) Language problems

If someone answers I "preferred to manage myself". Which of the following best describes why you preferred to manage yourself rather than seek (during the past 12 months)?

- a) You didn't think they knew how to help
- b) You were uncomfortable talking about these problems
- c) You relied on faith and spirituality
- d) You relied on family and friends
- e) You felt you'd be treated differently if people thought you had these problems
- f) You didn't feel ready to seek help
- g) You couldn't get this kind of help where you live
- h) Other (Specify) \_\_\_\_\_

During the past 12 months, have you seen, or talked on the telephone to any of the following people about problems with your emotions, mental health or use of alcohol or drugs. If more than one, pick the most recent.

- a) Psychiatrist/psychologist
- b) Family doctor or general practitioner
- c) Social worker, counsellor, psychotherapist

If a) In general how much would you say the psychiatrist/psychologist/ helped you (for your problems with your emotions, mental health or use of alcohol or drugs).

- a) A lot
- b) Some
- c) A little
- d) Not at all
- e) N/A

If b) In general how much would you say the Family doctor or general practitioner / helped you (for your problems with your emotions, mental health or use of alcohol or drugs).

- a) A lot
- b) Some
- c) A little
- d) Not at all
- e) N/A

If c) In general how much would you say the social worker/counsellor / helped you (for your problems with your emotions, mental health or use of alcohol or drugs).

- a) A lot
- b) Some
- c) A little
- d) Not at all
- e) N/A

Have you stopped seeing the psychologist/psychiatrist/counselor/social worker.

- a) Yes
- b) No
- c) N/A

If yes why did you stop?

- a) You felt better
- b) You completed the recommended treatment
- c) You thought it was not helping
- d) You thought the problem would get better without more professional help
- e) You couldn't afford to pay
- f) You were too embarrassed to see the professional
- g) You wanted to solve the problem without professional help

- h) You had problems with things like transportation, childcare or your schedule
- i) The service or program was no longer available
- j) You were not comfortable with the professional approach
- k) Because of discrimination or unfair treatment
- l) Other-specify.

If you talked to a family member or friend with problems with your emotions, mental health or use of alcohol or drugs? How much did they help you?

- a) A lot
- b) Some
- c) A little
- d) Not at all

What else could have been done for you during your difficult time? \_\_\_\_\_

**Appendix B**

## Consent Form

**Research Project Title: Correlates and Outcomes of Sudden Death Bereavement in University Students****Student Investigator:**

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This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Bereavement is the loss of a loved one through death. In this study we will be examining bereavement in university students and the impact that the loss of a loved one has had on them.

You will be asked to complete an online questionnaire that will take approximately 1.5 hours of your time. This survey will be administered using the *Qualtrics* software.

You may be invited to participate in the second part of this study. You will watch a video, which provides you with information on how to cope with bereavement as well as how to seek help. After this information is provided to you, you will be asked to provide feedback on how and if the information helped you and how we can improve the information provided. This should also take approximately 1.5 hours of your time and will be completed online.

Your participation in this study will greatly enhance our understanding of how university students cope with bereavement. In addition, upon completion of this study you will be provided with a list of resources containing information about bereavement support.

Due to the nature of this study it is possible that you may experience some distress such as sadness, as you think about the loss of the loved one. However, we will provide you with a list of helping resources to use if you feel distressed. You will also have the opportunity to leave this study at any time without penalty, and you can choose not to answer questions that may be distressing to you. In addition, based on your response to the questionnaires, the researcher may initiate contact with you in order to provide resources and information that may be beneficial to you. The researcher will also contact you to follow up should s/he believe that participation in this study proved distressing to you (For example if you exited the survey early we will follow up to determine whether participation was distressing for you and provide you with a list of resources that you can access). You are also welcome to contact the researcher by phone or email, should participation prove distressing to you.

All data will be confidential. The data will be stored in a locked lab, accessible only by a passcode, on a password-protected computer on a secure server. Only the primary researchers in this study will have access to the linked data. Once the follow up survey has been conducted, the data will be anonymized and no identifying information will be linked to your data.

**If for Introduction to Psychology students:** We appreciate your participation in this study and you will be compensated for your time. If you participate in the survey, the intervention, and the follow-up survey, you will receive 6 credits. You will not be penalized for withdrawing from this survey. Please note that students from XX section are not eligible to participate in this survey and will not receive credit for participation.

**If for the University of Manitoba population:** We appreciate your participation in this study and you will be compensated for your time. You will not be penalized for withdrawing from this survey. Upon completion of the initial survey of this study you will receive your choice of a 5\$ Amazon or Starbucks gift card. Upon completion of the intervention component and the follow up survey, you will receive another 5\$ Amazon or Starbucks gift card.

At the end of your participation in this study, should you wish, a researcher will schedule a phone call with you to discuss your experience in the study and to answer any questions or concerns you may have.

Once all data collection has been completed (approximately November 2017), you can expect a brief summary of results. Results will be sent to the email address you registered with.

Your anonymized survey data answers will be kept until the student researcher in question graduates from the program.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial

consent, so you should feel free to ask for clarification or new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above named persons or the Human Ethics Coordinator at 204-474-7122 or [humanethics@umanitoba.ca](mailto:humanethics@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference.

I consent to participating in this research study:

Participant's Signature \_\_\_\_\_ Date \_\_\_\_\_

Researcher and/or Delegate's Signature \_\_\_\_\_ Date \_\_\_\_\_

I consent to be contacted for future studies and for my contact information to be stored for this purpose.

Preferred method of contact (Circle one) - Phone/ Email

Phone number (if preferred) \_\_\_\_\_

Email address (if preferred) \_\_\_\_\_

I consent to be contacted with information about the findings of this study once all data has been collected

Preferred method of contact (Circle one) - Phone/ Email

Phone number (if preferred) \_\_\_\_\_

Email address (if preferred) \_\_\_\_\_ .

## Appendix C

### Resource List for Students

#### I. Crisis Support and Intervention

If you are experiencing a mental health crisis, the following resources provide information about centers that have experience with crisis intervention and management.

#### **What is a crisis (Klinik Community Health Webpage, [www.klinik.mb.ca](http://www.klinik.mb.ca))**

A crisis is a time in your life when you feel like you are struggling and are having difficulty coping.

You may experience:

- Feelings of fear, failure, uncertainty, powerlessness, hopelessness, confusion and sadness
- A sense of losing control
- Thoughts of suicide
- Headaches, muscle tension, chronic fatigue or other physical problems
- Changes in eating or sleeping habits
- Isolating yourself
- Difficulty concentrating
- Anger and other mood swings
- Alcohol or drug problems

#### **a. Manitoba Suicide Prevention & Support Line (24/7)**

Toll free: 1-877-435-7170

TTY: (204) 784-4097

[www.reasontolive.ca](http://www.reasontolive.ca)

**Information:** This free service is staffed 24 hours. All calls are confidential. Trained counselors are on hand to provide a safe space for you to discuss your situation in a caring and compassionate manner. Call if you are struggling with suicidal thoughts or feelings, concerned about a family member or friend, or have been yourself impacted by a loss or suicide attempt.

**Cost:** Free

#### **b. Klinik Crisis Line (24/7)**

Toll free: 1-888-322-3019

TTY: (204) 784-4097

[www.reasontolive.ca](http://www.reasontolive.ca)

**Information:** This is another free service provided by Klinik that is staffed 24 hours. All calls are confidential. Trained counselors are on hand to provide a safe space for you to discuss your situation in a caring and compassionate manner. Call if you are in a crisis.

**Cost:** Free

**c. The First Nations and Inuit Hope for Wellness Help Line (24/7)**

Toll free: 1-855-242-3310.

**Information:** This is a free service provided by the government of Manitoba that is staffed 24 hours. All calls are confidential. Trained counselors are on hand to provide a safe space for you to discuss your situation in a caring and compassionate manner. Phone sessions can take place in English and French and upon request in Cree, Ojibway and Inuktitut.

**Cost:** Free

**d. Crisis Chat Line**

Hours: Monday to Friday: 10am to 9pm.

Hours: 24/7

**www.supportline.ca**

**Information:** This is a free online counseling service provided by Klinik. The Chat Support Line allows you to talk to a counselor in real time. It is available to anyone in Manitoba. Trained counselors are on hand to provide a safe space for you to discuss your situation in a caring and compassionate manner. The discussions take place in a secure chat and all chats are confidential.

**Cost:** Free

**e. CRISIS****Crisis Response Centre**

Hours: 24/7

817 Bannatyne Avenue, Winnipeg; attend in person

**Information:** The CRC is open 24/7 for adults experiencing a mental health crisis. The CRC is specifically designed to help individuals experiencing:

- Personal distress and the risk of potential harm associated with an immediate crisis, including suicidal behaviour
- Signs and symptoms of a condition requiring urgent mental health assessment and treatment
- Intense emotional trauma where assessment, crisis intervention and linkage to other services can occur
- An immediate risk after hours when the ongoing mental health service provider is not available

**Cost:** Free

**f. Adult Mobile Crisis Service**

Hours: 24/7

Ph: 204-940-1781

**Information:** The Mobile Crisis Service is available 24/7 to provide on-site assistance with a mental health crisis. The team can respond to individuals experiencing a mental health crisis. The team can also meet with individuals in crisis at a location within Winnipeg that is comfortable for them, either in their home or a safe location.

**Cost:** Free



**II. Services for University of Manitoba (All of these services are free)****a. The Psychological Service Centre, University of Manitoba****Hours: Variable****Fee: Free**

161 Dafoe Building,

Winnipeg, MB R3T 5V5

Website: [http://umanitoba.ca/faculties/arts/departments/psych\\_services/](http://umanitoba.ca/faculties/arts/departments/psych_services/)

1-204-474-9222

**Information:** Graduate Student counselors provide therapeutic and assessment services under the supervision of licensed clinical psychologists. Everyone is eligible to apply for service.

**Cost:** Free**b. The Student Counselling and Career Centre, University of Manitoba****Hours: Monday to Friday (8:30am to 4:30pm)****Fee: Free**

474 University Centre, University of Manitoba,

Winnipeg, MB R3T 2N2

Website: <http://umanitoba.ca/student/counselling/>

(204) 474-8592

**Information:** The Student Counselling Centre (SCC) provides personal counselling at the Fort Garry campus. The SCC also offers groups and workshops where you will be able to talk not only with a counsellor but also with other students with similar questions and challenges.

**Cost:** Free**c. The Indigenous Student Centre (ISC)****Hours: Monday to Friday (8:30am to 4:30pm)**

114 Sidney Smith St, University of Manitoba,

Winnipeg, MB R3T 2N2 Canada

(204) 474-8850

Website: <http://umanitoba.ca/student/indigenous/>

**Information:** The Indigenous Student Centre provides personal counseling, advocacy and support. They also provide students with on and off campus information and referrals.

**Cost:** Free

### III. Services in the Community

#### a. Winnipeg Regional Health Authority

**Hours: Variable**

161 Dafoe Building,  
Winnipeg, MB R3T 5V5

**Information:** Cognitive Behaviour Therapy (CBT), Interpersonal Therapy, Dialectical Behavioral and Experiential Therapy are provided in group and individual formats. Those waiting for service can receive access on the website ([findingwellness.ca](http://findingwellness.ca)) for helpful tips on coping with depression. Your healthcare provider has to refer you to this service.

**Cost:** Free

#### b. Aurora Family Therapy Centre

**Hours: Variable**

**Fee: Sliding Scale**

491 Portage Ave (5th floor),  
Winnipeg, MB R3B 2E4

**Information:** Therapists at the Aurora Family Therapy centre are trained to work with a variety of mental health and life issues. These include issues surrounding trauma and grief.

**Cost:** Sliding Scale (i.e. based on your income)

#### c. The Aulneau Renewal Centre

**Hours: Variable**

**Fee: Sliding Scale**

228 Hamel Ave,  
Winnipeg, MB R2H 0K6  
(204) 987-7090

**Information:** Therapists at the Aulneau Renewal Centre provide counseling in both English and French with issues surrounding anger, isolation, substance use, parenting challenges, relationship problems and grief. Please note that Aurora does not provide long term counseling services or crisis response services.

**Cost:** Sliding Scale (i.e. based on your income)

#### d. Fort Garry Women's Resource Centre

**Hours: Variable**

**Fee: Sliding Scale**

1150 Waverley St,  
Winnipeg, MB R3T 0P4  
(204) 477-1123

**Information:** Therapists at the Fort Garry Women's Centre provide women with both individual and counseling. Individual counseling can be provided as one-time counseling or as ongoing counseling on a variety of mental health and life concerns.

**Cost:** Free

**e. Klinik Community Health Centre- Crisis Counselling Services**

**Hours:** Variable

**Fee:** Free

**Location:** 545 Broadway, 845 Regent Avenue West

**Email** dropin@klinik.mb.ca

**Information** Klinik's Drop In Counselling services are provided by volunteers or employees who are trained to provide counseling on a variety of issues including grief or loss, sudden life changes, alcohol or drug use, relationships and mental health concerns including depression and anxiety.

**f. Youville Community Health Resource Centre- Counselling Services** Hours: Variable

**Fee:** Free

**Location:** 33 Marion Street

**Information** Services are provided both in English and French. A diverse mix of culturally sensitive ranging from wellness education to counseling and support. The centre takes a holistic approach attending to the needs of the mind, body and spirit.

**g. Women's Health Clinic Services**

**Hours:** Variable

**Fee:** Free

**Location:** 419 Graham Ave A, 204-947-2422 ext. 204

**Information** Services are provided by trained counselors from a feminist model. You and your counsellor will work together to help you develop a sense of your own power and ability to manage your life in healthy ways by becoming aware of your emotions, strengths, needs, and supports.

**h. Centre Renaissance Centre**

**Hours:** Variable

**Fee:** Sliding Scale

**Location:** 844 Autumnwood Dr,

**Information** Long term and short term bilingual services are provided by trained counselors. They work with our clients in to explore ways of coping, meeting life challenges and goals, resolving and overcoming issues, crisis and stress points.

**i. Family Dynamics****Hours: Variable****Fee: Sliding Scale****Location:** 393 Portage Ave, 204-947-1401**Information** Experienced counsellors practise a strength-based, holistic approach building on your strengths and support systems.**j. Jewish Child and Family Counselling Services****Hours: Variable****Fee: Sliding Scale****Location:** Suite C200 – 123 Doncaster St**Information** Counselling services available to **all** Manitobans of every religious and ethnic background. JCFS counsellors have a vast expertise with a wide variety of problems. On-site psychiatric consultation is available, when deemed necessary. Individual, group and family counseling available**k. Aboriginal Health and Wellness Centre of Winnipeg****Hours** **Variable****Fee** **Free**

204-925-3700

e-mail: reception@ahwc.ca

215-181 Higgins Ave, Winnipeg, MB R3B 3G1

**Information** Staff use a holistic approach following the Medicine Wheel to address the physical, mental, spiritual and emotional wellbeing of individuals. Traditional and spiritual healing is also available through ceremonies and spiritual advice.**l. Circle of Life/Thunderbird House****Hours** **Variable****Fee** **Free**

204) 940-4240

715 Main Street

**Information** Spiritual counseling is provided by elders and spiritual leaders using the values of Kindness, Sharing, Honesty and Belief**m. Private Psychological Services****Hours** **Variable****Fee** **Variable**<http://members.mps.ca>**Information** All U of M students have access to a private psychologist through the university health insurance plan.