

Spring 6-11-2021

## **Life After the Storm: An Examination of Bereavement and Posttraumatic Growth among Urban Adolescents**

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Life After the Storm: An Examination of Bereavement and Posttraumatic Growth among  
Urban Adolescents

A Thesis

Presented in

Partial Fulfillment of the  
Requirements for the Degree of  
Master of Arts

By

Keturah Jedidah Platt

July 2020

Department of Psychology

College of Science and Health

DePaul University

Chicago, Illinois

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## **Acknowledgments**

First and foremost, I would like to thank God for providing me strength and comfort to be able to complete this milestone. I am also extremely grateful for the support of my mother who has encouraged me throughout my education. From preschool to graduate school, she has stayed by my side and provides me with laughs when I need them most.

To one of my dearest friends, Sidney, I wholeheartedly dedicate my thesis to you as you were one of my biggest cheerleaders and sources of support. Thank you for listening to my thesis ideas in the middle of the night. Your legacy lives on in my heart, and I will continue to make you proud.

Last but certainly not least, I would like to send my utmost gratitude to my advisor, Kathryn Grant. You are one of the most beautiful souls that I have ever met, and I would not have made it to this point without your genuine love, encouragement, and support. I also would like to thank my thesis committee, Jocelyn Carter and Leonard Jason. You both are so helpful, kind, and I appreciate your willingness to collaborate on this passion project of mine. I also would like to thank my fellow DePaul colleague, Heather Marshall, friends, my hometown community, and one of a kind family. It truly takes a village, but we did it.

## **Biography**

Keturah Jedidah Platt was born in Oakland, California on October 3, 1994. She graduated from Castlemont High School, in Oakland, California. She acquired her Bachelor of Arts degree in Psychology and double minored in Child and Family Development and Counseling and Social Change from San Diego State University in 2017. After graduating with her undergraduate degree, Keturah began the Clinical-Community Psychology PhD program at DePaul University.

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## Abstract

The loss of a loved one due to death can be one of life's most painful and traumatic experiences. During this challenging period, individuals are more prone to developing physical and emotional health problems. Even though these difficulties should be fully acknowledged, it is important to also acknowledge the possibility of posttraumatic growth (PTG) following bereavement. PTG refers to the positive psychological changes that may occur as a result of highly stressful events and circumstances. These changes include growth in the following five areas: (a) New Possibilities, (b) Relating to Others, (c) Appreciation of Life, (d) Personal Strength, and (e) Spiritual Change. PTG has been found consistently in adults with various traumas, but there is still more to learn about PTG among adolescents. Given that death is one of the most stressful life events experienced by youth, bereaved adolescents are an appropriate population in which to examine PTG. Those who live in urban areas are of particular concern due to their heightened exposure to neighborhood violence, which can increase susceptibility to traumatic events and experiences of loss. In order to gain a better understanding of growth processes in the midst of experiencing the death of a loved one, factors that are related to growth-related outcomes were the primary focus of this research. Sudden and violent deaths were hypothesized to have a greater influence on PTG outcomes compared to more seemingly "natural" and anticipated deaths. The loss of first-degree relatives and friends were also expected to produce greater profiles of PTG compared to second-degree relatives or other adults (non-relatives). Lastly, social support, active coping, and rumination were expected to generate more PTG outcomes in youth. Given that bereavement research has focused largely on the negative outcomes of loss and trauma,

this study's researcher sought to understand positive transformations following bereavement in an urban adolescent population.

There were a total of 408 adolescents (46.6% male; 53.4% female) in grades six through 12 who participated in this study and were recruited from three urban schools. Data collection took place at two time points, six months apart, and included the Post Traumatic Growth measure for the growth outcome variable, Losing People in the Past measure to assess students' experiences of loss, the Response to Stress Questionnaire to assess coping strategies, and the Places I Spend Time measure to assess social support. In this study, the researcher applied a moderated regression analysis to investigate the moderating effects of bereavement type, relationship with the deceased, and coping strategies on PTG outcomes. The results indicated a statistically significant relationship between bereavement and PTG, while revealing no support for the hypothesized moderators to this relationship. Specifically, bereavement type, relationship with the deceased, and coping strategies did not interact with bereavement to account for additional PTG outcomes.

Life after the Storm: An Examination of Posttraumatic Growth and Bereavement among  
Urban Adolescents

**Chapter I: Introduction**

Bereavement is a distressing, but common experience among young people. According to Johnson, Torres, Sykes, Gibson, and Baker (2017), by the time adolescents graduate from high school, most (71%) have experienced a loss. The death of a loved one can disrupt an adolescent's assumptions that one's world is predictable, relatively stable, and safe (Burdett Schiavone, 2009; Pérez-Sales, 2010). The adverse effects of bereavement may include (but are not limited to) shock, numbness, guilt, confusion, depression, and a sense of hopelessness (Ens & Bond, 2007). Further reactions to the loss of a loved one include yearning for the deceased and elevations in symptoms of multiple forms of psychopathology (Keyes et al., 2014; Tedeschi & Calhoun, 2004).

Although many adolescents may experience loss due to death, the prevalence and incidence of sudden and violent deaths are significantly higher in low-income urban communities (Smith, 2014). In a study of 127 cities and towns across the United States, researchers found that most of the firearm homicides occurred in neighborhoods marked by intense poverty, low education levels, and racial segregation (Aufrechtig, Beckett, Diehm, & Lartey, n.d.). Thus, individuals who reside in these communities have been shown to face an average gun homicide rate approximately 400 times higher than those who live in high-income areas (Aufrechtig et al., n.d.). Sudden and violent losses are not only restricted to homicide, but also include deaths linked to suicide or an accident (Smith, 2014). Losses from homicide, suicide, or an accident can lead to even greater physical and mental health consequences than those from more natural causes (Kaltman

& Bonanno, 2003; Kristensen, Weisæth, & Heir, 2012). From experiencing sleep difficulties to thinking deeply about how the death could have been prevented (Kristensen et al., 2012), bereavement trajectories following sudden and/or violent deaths are rightfully challenging to process and accept.

In addition to acknowledging religious roots with the idea of growth following adversity, it is also important to distinguish growth from resilience. Resilience usually refers to an ability to persevere through life after experiencing hardships (Tedeschi & Calhoun, 2004). Despite experiencing tough circumstances, resilient individuals demonstrate a stable trajectory of healthy functioning over time (Bonanno, 2004). In contrast to resilience, growth exceeds these levels of adaptation and implies that there is an advance from an individual's baseline levels of functioning (McGrath, 2006). It is expressed as improved interpersonal relationships, changed self-perception, and a shift in philosophy of life (McGrath, 2006). According to McGrath, most psychological theories that attempt to explain growth outcomes have a common notion that growth involves the reorganization of assumptions or cognitive schemas. Shattered assumptions theory is one of these theories as it focuses on the destructive nature trauma has on an individual's belief system (Schuler & Boals, 2016). This includes disruptions in perceptions of self-worth along with changed views regarding the benevolence and meaningfulness of the world (Janoff-Bulman, 1989). For bereaved individuals, beliefs about the predictability and controllability of the world can be shattered through experiencing untimely and violent deaths (Gerrish, Dyck, & Marsh, 2009). For growth to occur, these shattered assumptions need to be re-established or discarded and replaced with a broader world view that is better able to make meaning of suffering.

Through the lens of positive psychology, the period following trauma and loss were the focus of the present study. Research questions delved into the construct of posttraumatic growth among bereaved adolescents living in urban areas. While experiencing chronic stressors that are beyond their control in their environment and personal lives, the present study's researcher aimed to understand how some adolescents are managing to derive meaning and achieve growth outcomes after experiencing the death of a loved one.

### **Posttraumatic Growth**

Growth or positive change has been shown in individuals following trauma and/or bereavement. Positive change has been defined in various terms, including post-traumatic growth (PTG; Calhoun & Tedeschi, 2001). PTG represents positive psychological changes that occur from a struggle to handle highly stressful circumstances (Tedeschi & Calhoun, 2004). There are five domains within this construct that include: (a) a greater appreciation of life, such as the recognition of things formerly taken for granted; (b) more meaningful and close relationships with other people as well as an increased sense of compassion for those who have experienced similar hardships; (c) a general sense of increased strength, including accepting that bad things happening are inevitable and the discovery that "if I handled this then I can handle just about anything;" (d) an individual can also identify new and different possibilities for their life, such as taking on a career path that was influenced by their loss experience; and (e) spiritual and existential growth is another domain of PTG, where there can be greater engagement with fundamental existential questions or belief that God comforted them through their grapple with stress and loss (Tedeschi & Calhoun, 2004).

Literature makes it clear that growth does not occur as a direct result of trauma, but rather in the middle of trying to make sense of a new reality in the aftermath of trauma (Tedeschi & Calhoun, 2004). There is cognitive rebuilding that takes place in which an individual incorporates their experienced trauma and possible events in the future into schemas, which become more resistant to being shattered (Tedeschi & Calhoun, 2004). These reconstructed schemas determine the extent to which post traumatic growth occurs (Tedeschi & Calhoun, 2004). On the other hand, if a bereaved individual is unable to take in new information and rebuild their schemas, posttraumatic stress disorder (PTSD) could develop. Trauma involves shattered assumptions, but PTG is a schema reconstruction process that fosters a sense of meaning and growth (Gerrish et al., 2009).

### **Bereavement Type**

Although not all people confronted with bereavement experience growth, one study by Ickovics et al. (2006), found that adolescents who identified death of a loved one as their most traumatic event, reported significantly more PTG than those who identified relationship problems, vicarious experience of another person's problems, and sexual abuse or harassment as their most significant trauma. Furthermore, when the death of a loved one was violent or sudden, there was a greater likelihood of an individual experiencing psychological challenges and growth. Not only can this type of death increase feelings of vulnerability to more losses that are unpredictable and tragic, but it can also lead people to experience themselves as stronger and more self-confident (Calhoun & Tedeschi, 1990; Calhoun, Tedeschi, Cann, & Hanks, 2010).

One reason for this paradoxical outcome is related to the process of adapting to a significant loss. Experiencing a violent or unexpected loss has the potential to shatter assumptive world beliefs, and this disruption requires cognitive rebuilding efforts to prepare for possible growth (Calhoun et al., 2010). Despite the fact that unexpected deaths often lead to greater distress, evidence suggests that there is a higher chance for growth outcomes in these types of losses (Tedeschi & Calhoun, 2006). Armstrong and Shakespeare-Finch (2011) found support for this finding in their study, in which participants who reported their loss as more traumatic and severe, reported higher levels of PTG scores. In comparison, a “natural death”, at the end of a long life for example, tends to be easier to accept and requires less work for a sense of meaning to be found (Gillies & Neimeyer, 2006; Lehman, Wortman, & Williams, 1987). In other words, there may be less of a need to rebuild schemas in cases of natural and expected deaths, which in turn may result in less PTG. Overall, prior literature suggests that individuals who experience more distress have the potential for greater PTG.

### **Relationship to Deceased**

Along with the type of death contributing to differences in PTG, relationship to the deceased may also play a role (Armstrong & Shakespeare-Finch, 2011). To date, there are only a few studies that have investigated adolescents’ PTG in relation to their relationship with the deceased. Armstrong and Shakespeare-Finch (2011) found that participants who lost a first-degree relative (e.g., parent, sibling, partner, or child) showed higher levels of PTG compared to those who had lost a second-degree relative (e.g., aunt, cousin, grandparent). More specifically, first-degree relatives had significantly higher PTG scores than second-degree relatives on the New Possibilities and Personal Strength

domain of PTG (Armstrong & Shakespeare-Finch, 2011). By comparison, growth domains after the death of a friend were not significantly different than those for either a second or first-degree relative (Armstrong & Shakespeare-Finch, 2011). The extent of involvement the deceased had in an individual's life (i.e., day-to-day interactions and emotional support), likely dictates the amount of need for post-trauma adjustment and integration of the new reality post-bereavement (Armstrong & Shakespeare-Finch, 2011).

An additional study found that among 93 older adolescents who experienced the death of a family member or friend, 89 (96%) identified positive outcomes following the loss of these relationships. This includes a deeper appreciation of life, greater care for loved ones, strengthened emotional bonds with others, and matured emotional strength (Oltjenbruns, 1991). Although to a lesser degree, other positive outcomes were also noted in this study, such as increased empathy for others, improved communication skills, and greater problem-solving abilities (Oltjenbruns, 1991). Adolescents also emphasized that losing a family member or friend helped them to examine their religion more closely (Oltjenbruns, 1991), which aligns with the spiritual change domain of PTG. Even though the death of these significant relationships can lead to unfortunate consequences, Oltjenbruns (1991) highlighted the potential of adolescents to gain essential insight about themselves, life, and others during this difficult time.

Similar to Armstrong and Shakespeare-Finch (2011), Hirooka, Fukahori, Ozawa, and Akita (2017) found that adolescent participants who lost a parent (i.e., first-degree relative) reported higher PTG in the New Possibilities and Personal Strength domains. Parental death had more of a positive impact on adolescents compared to the death of a grandparent (Hirooka et al., 2017). In addition to likely differences in closeness, bereaved



individuals may also perceive an older person's death as more natural and anticipated (Hirooka et al., 2017). Participants in both studies (Armstrong & Shakespeare-Finch, 2011; Hirooka et al., 2017) were outside of the United States (i.e., Australia and Japan), demonstrating the need for further research among United States populations.

### **Coping Strategies and Social Support**

In addition to the relationship with the deceased contributing to differences in PTG outcomes, researchers have noted that coping efforts are significantly associated with PTG. Findings suggest that active coping strategies in particular, nurture positive growth (Michael & Cooper, 2013). Active coping efforts are meant to achieve some degree of personal control over the stressful aspects of a person's environment and emotions (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Results from earlier studies have demonstrated the positive influence of this specific coping style. For example, Aldridge and Roesch (2008) reported that minority adolescents who managed stress with active coping strategies experienced significantly more growth than "avoidant copers."

Interestingly, in another study of parentally bereaved adolescents and young adults, active coping and avoidant coping were both positively related to scores on the New Possibilities and Personal Strength domains of the Posttraumatic Growth Inventory (Wolchik, Coxe, Tein, Sandler, & Ayers, 2009). For the purposes of the study by Wolchik et al., active coping was defined as problem focused strategies and positive cognitive restructuring whereas avoidant coping included avoiding the problem and engaging in wishful thinking. Although active coping may be less effective in handling uncontrollable stressors, it is generally associated with positive outcomes in children and

adolescents in the broader literature (Meyerson, Grant, Carter, & Kilmer, 2011). In their review of PTG among children and adolescents, Meyerson et al. suggested additional research is needed to understand how coping strategies aid in positive outcomes which is a focus of the present study.

Rumination is another coping style related to adolescent PTG. From a trauma lens, it is a cognitive process of continuously thinking about traumatic events and their consequences (Watkins, 2008). Although rumination is predictive of distress, it can also allow for positive reinterpretation, which is then included in the reconfigured, post-trauma schemas (Meyerson et al., 2011). This cognitive process usually takes on two different forms including intrusive rumination and deliberate rumination (Calhoun & Tedeschi, 2006). Intrusive rumination has been described as repetitive, negative, and unwanted thoughts whereas deliberate rumination is characterized as being repetitive, reflective, and purposeful thoughts (Calhoun & Tedeschi, 2006). Deliberate rumination has been shown to lead to PTG as it involves rebuilding shattered assumptions for an individual to grasp the reality of their traumatic experience (Calhoun & Tedeschi, 2006). Once progress has been made toward making sense of the experience, an individual is better able to cope with their changed circumstances (Calhoun & Tedeschi, 2006). The role of rumination in PTG has mostly been studied with adult populations and adolescents living outside of the United States (i.e., China) with mixed results. For example, as opposed to PTG outcomes, deliberate rumination was more positively associated with PTSD among Chinese adolescents who survived a tornado (Zhang, Xu, Yuan, & An, 2018). But, another study of adolescents who experienced an earthquake in China found that deliberate rumination positively predicted PTG (Wang, Wu, & Lan,

2020). The association between rumination and PTG in the context of bereavement among racially and ethnically diverse adolescents in the United States has rarely been studied and is another focus of the present study.

Social support may also predict PTG and has been shown to include multiple components such as: (a) information that one is cared for and loved, (b) information that one is esteemed and valued, and (c) information that one belongs to a group (Michael & Cooper, 2013; Pearson, 1986). Social support is not only protective for adolescent distress (Camara, Bacigalupe, & Padilla, 2017), but it also lessens the impact of stressful events and increases well-being (Cohen & Wills, 1985). Social support systems that are correlated with growth outcomes in the context of adolescent bereavement include support from either a parent and/or guardian (Wolchik et al., 2009). Findings suggest that parents and guardians may offer ideas about how to reconstruct schemas and make meaning of an experienced death or loss (Wolchik et al., 2009). Moreover, supportive relationships may support PTG by providing perspectives that can be integrated into reconstructed schemas (Prati & Pietrantonio, 2009). Parents and guardians may also provide opportunities for self-disclosure and validation of painful feelings related to the loss (Wolchik et al., 2009). Kimhi, Eshel, Zysberg, and Hantman (2009) found evidence of the relationship between family support and growth outcomes among Israeli adolescents exposed to war-related trauma. But, this study is one of the first to examine the potential role of social support in PTG outcomes in bereaved urban adolescents.

### **Trauma and Environmental Stressors**

Given the disproportionate rates of violent death in United States urban areas, there is a great need to assess its impact on bereaved individuals living in these

environments. Urban adolescents are subjected to an immense number of traumas and severe life stressors, including community violence. The average annual violent crime rate in urban areas is about 74% higher than the rural rate and 37% higher than the suburban rate (McCart et al., 2007). Social determinants of violence include residential segregation, racism and discrimination, educational disparities, high unemployment rates, poverty, and overcrowding (Eitle, D'Alessio, & Stolzenberg, 2006; LaVeist, 2005; Stewart & Simons, 2010). Community violence exposure includes not only being a victim of violence, but also witnessing others, such as friends and family members, being victimized by violence (Liu, Bolland, Dick, Mustanski, & Kertes, 2015).

In a representative study of urban adolescents, 31% of sixth grade boys and 14% of girls had someone threaten to kill them; forty two percent of boys and 30% of girls saw someone shot; and 87 to 96% of both boys and girls witnessed arrests, seen others being beaten up, or heard gunfire (Farrell & Bruce, 1997, as cited in Taylor & Kliever, 2006). Fitzpatrick and Boldizar (1993) also found that among urban youth aged 7-19, 43% witnessed a murder.

Due to urban adolescents' environmental circumstances of social and economic disadvantage in their communities, they are more vulnerable to experiences of sudden and violent deaths. This includes the loss of a loved one to homicide, suicide, or accidents (Smith, 2014). These types of losses share common features of suddenness and violence, but also each has their own unique characteristics. Compared to those bereaved by accidents or suicide, those bereaved by homicide exhibit higher levels of prolonged grief disorder (PGD) and PTSD (Currier, Holland, & Neimeyer, 2006; Murphy, Clark Johnson, Wu, Fan, & Lohan, 2003). Close relatives of homicide victims also carry an additional

burden of being in contact with the criminal justice system (Gintner, 2001). Further, individuals bereaved by suicide often report higher levels of grief-specific symptoms, such as rejection, shame, stigma, and blame, and they may be more likely to not want the cause of death of their loved one disclosed (Sveen & Walby, 2008). Sudden and violent losses not only make it difficult for individuals to grasp the reality that their loved one has passed, but there is also a common reaction of experiencing guilt (Lehman et al., 1987). Relative to other types of losses, sudden and violent losses also hinder the bereaved to say a final goodbye (Kristensen et al., 2012). Sudden, unexpected, or violent loss of a loved one has been shown to be one of the most common life events leading to PTSD and more persistent depressive symptoms (Brent, Melham, Donohoe, & Walker, 2009; Breslau et al., 1998; Kaltman & Bonanno, 2003; Van Ameringen, Mancini, Patterson, & Boyle, 2008).

Although youth growing up in urban neighborhoods are more likely to experience a sudden and violent loss, not all of these adolescents develop maladaptive outcomes. Positive changes may emerge, such as adolescents developing a more positive perspective on life (Arpawong et al., 2015). After experiencing any type of death (i.e., sudden and unexpected or seemingly natural and anticipated), negative outcomes should be rightfully acknowledged but so should the possibility of growth. While experiencing PTSD for example, a personal narrative of life before and after the trauma can develop and result in positive changes in identity (Tedeschi, 1999). Growth requires a level of traumatization, and as new meanings are developed, cognitive disruption characterized by posttraumatic stress can strengthen core beliefs and schemas or result in new beliefs and schemas that provide greater meaning for times of suffering (Ickovics et al., 2006). The

present study's researcher focused on possible predictors of these processes in urban adolescents due to their higher risk of experiencing violent trauma (Tedeschi, 1999).

There is very little published research on factors related to growth outcomes among urban adolescents, but at least one study has highlighted significant predictors of PTG outcomes. In a quantitative research study among urban adolescent girls, type of traumatic event was related to subscales of PTG (Ickovics et al., 2006). As mentioned previously, participants in this study who reported interpersonal problems as their most significant trauma reported a lesser degree of PTG than adolescents who reported bereavement as their most traumatic experience (Ickovics et al., 2006). Death of a loved one was also one of the most common traumatic events experienced by urban youth (Ickovics et al., 2006), which further highlights the uncontrollable stressors experienced by young people in urban communities. This study was limited by solely examining urban adolescent girls. The present study builds on previous research to consider growth outcomes in both male and female urban adolescents.

### **Rationale and Current Study Hypotheses**

Although the literature has clearly established the adverse effects of residing in urban contexts and experiencing bereavement, there has been a growing curiosity in further understanding psychological growth, religion and spirituality, and positive outcomes following the loss of a loved one (Balk, 1999; O'Rourke, Tallman, & Altmaier, 2008; Park & Helgeson, 2006; Shaw, Joseph, & Linley, 2005; Tedeschi & Calhoun, 2004; Wortmann & Park, 2008). The present study's researcher sought to understand bereavement from a strength-based perspective. Loss of a close relationship through

death has traditionally been viewed from a deficit-based lens, but the aim of this study was to highlight growth-related outcomes following bereavement.

There is limited research on PTG in response to experiences of loss among adolescents (Johnson et al., 2017; Ringler & Hayden, 2000). Most of the empirical literature has focused on growth related outcomes following diagnosis of life-threatening illnesses, such as cancer or HIV in adults (Ickovics et al., 2006). Although this provides essential information to further understand contexts of PTG, more research is needed on possible associations of PTG with other stressors and traumas affecting adolescents, especially urban adolescents, who experience higher levels of trauma in their daily lives. Given that there are limited studies of PTG among bereaved adolescents, the present study's researcher delved deeper into the bereavement experiences of urban adolescents through a quantitative study.

### **Statement of Hypotheses**

**Hypothesis I:** Bereavement will significantly predict PTG.

**Hypothesis II:** Experiencing a sudden and violent loss will predict higher levels of PTG as compared to seemingly "natural" deaths. Furthermore, experiencing a sudden and violent loss will interact with bereavement to predict additional PTG.

**Hypothesis III:** Adolescents who reported losing a first-degree relative or friend will report greater levels of PTG compared to youth who have experienced a loss of a second-degree relative or other adult (non-relative). Furthermore, losing a first-degree relative or friend will interact with bereavement to predict additional PTG.

**Hypothesis IV:** Adolescents who have the perceived availability of social support will report higher levels of PTG. Furthermore, social support will interact with bereavement to predict higher levels of PTG.

**Hypothesis V:** Adolescents who engage in active coping and rumination will report higher levels of PTG. Furthermore, each of these coping strategies will interact with bereavement to predict higher levels of PTG.



## **Chapter II: Methods**

### **Participants**

There were 408 adolescents in grades six through 12 who participated in this study. Participants were recruited from three diverse urban schools (two K-8th and one high school). Two hundred and twenty-eight census tracts, 23 crime districts, and 148 police beats were represented across the participants. The sample was approximately 46.6% male and 53.4% female. Racial and ethnic backgrounds included 34.6% Hispanic/Latinx, 34.3% African American/Black, 18.1% European American/White, 11% Asian or Asian American, 2.5% American Indian or Alaskan Native, .5% Native Hawaiian or Other Pacific Islander, 15% Bi-Racial or Multiracial, and 14.5% who identified as Other.

### **Procedure**

All measures and protocols in this study were approved by the Institutional Review Board at DePaul University and Northwestern University. Adolescent participants came for a full day of data collection at DePaul University on one of five consecutive Saturdays during the fall of 2012. Consent and assent forms were collected for all participants. Further activities included time for breakfast, lunch, and dinner, and breaks for relaxation/ recreation, short movies, college informationals, and a college tour. Students were randomly assigned to an order of participation in various measures and tasks throughout the course of a day. At the end of data collection, all participants were incentivized with a \$50 gift card to Target, Old Navy, or Best Buy. Students received an additional \$20 in gift cards if they returned parent rating forms (\$10 for themselves and \$10 for their parents). Measures utilized in the current study are summarized below.

## Measures

**Post-traumatic Growth.** The Post Traumatic Growth measure is an 11-item scale designed to assess positive psychological change in response to an encounter with trauma. The first item in this scale asks the participant to remember a bad experience or traumatic event (Kimhi et al., 2009). The 10 items that follow this prompt are scored on a four-point Likert scale with the following options: “no change”, “a little”, “some”, “a lot of change”. Higher scores signify heightened change. Sample questions include “I learned how nice and helpful some people can be,” “I can now handle big problems better than I used to,” and “I know what is important to me better than I used to,” (Kimhi et al., 2009). Internal consistencies in the present sample for each of the subscales were good: (a) New Possibilities ( $\alpha = .81$ ), (b) Relating to Others ( $\alpha = .81$ ), (c) Appreciation of Life ( $\alpha = .80$ ), (d) Personal Strength ( $\alpha = .82$ ), and (e) Spiritual Change ( $\alpha = .92$ ). There are two items for each subscale. Items for New Possibilities include (a) “I now have a chance to do some things I couldn’t do before” and (b) “I have new ideas about how I want things to be when I grow up.” Items for Relating to Others include (a) “I learned how nice and helpful some people can be” and (b) “I feel closer to other people (friends or family) than I used to.” Items for Appreciation of Life include (a) “I understand how God works better than I used to” and (b) “I appreciate (enjoy) each day more than I used to.” Items for Personal Strength include (a) “I can now handle big problems better than I used to” and (b) “I have learned that I can deal with more things than I thought I could before.” Items for Spiritual Change include (a) “I understand how God works better than I used to” and (b) “My faith (belief) in God is stronger than it was before.”

**Bereavement.** The Losing People in the Past measure (Duffy et al., 2020; Grant et al., 2020) captures in-depth experiences of loss and was used to assess bereavement (and characteristics of bereavement) in this study. Participants are able to list up to two people that they have lost in the past. The first item in the scale asks the participant if they have lost someone who they were “close” to. The following items allow the participant to identify their relationship with the person they have lost, how the person was lost, when they were lost, and how often the participant talked to the person before and after the loss. Options to describe the relationship include (but are not limited to), “an adult family member (like father or uncle),” “an adult who is not family (like a teacher or coach), and “friend/boyfriend/girlfriend.” Survey options to identify cause of death include (but are not limited to) “dying of old age”, “killing themselves”, “dying in an accident or disaster”, and “being murdered.” Psychometrics for the Losing People in the Past measure are being processed as part of a larger effort to establish psychometrics for a new taxonomy of stressors for adolescents (Grant et al., 2020).

**Coping Strategies.** Coping strategies were assessed with the Response to Stress Questionnaire (RSQ; Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Respondents were presented with three different types of stressful life experiences (e.g., academic stressors, social stressors, and violence stressors) and asked (a) to what extent they have been exposed to stressors of that type, (b) how stressful that exposure has been, and (c) their perceptions of control over the experience. Participants then responded to a series of 68 questions assessing the extent to which they use various types of strategies to cope with that particular type of stressor from 1 “not at all” to 4 “a lot”. In the present study, two types of coping were assessed with this measure: (a) active coping and (b)

rumination. A sample item that indicates active coping is: “I try to think of different ways to change or fix the situation.” A sample item that indicates rumination is: “When something stressful happens related to violence, I can’t stop thinking about how I am feeling.” As not all adolescents reported exposure to all types of stressors (e.g., violence) and, therefore, did not complete all three versions of the RSQ, the average scores for active and rumination coping across those stress measures the adolescent did complete were used. Good psychometrics have been established for the Response to Stress Questionnaire with diverse stressors and diverse samples (Nuttbrock-Allen, 2002; Wadsworth, Rieckmann, Benson, & Compas, 2004) with internal consistencies in the adequate to good range (Compas et al., 2001). In the present sample, internal consistency for active coping was low ( $\alpha = .56$ ) and good for rumination ( $\alpha = .74$ ).

**Social Support.** Social support was assessed using the Places I Spend Time measure (Duffy et al., 2020; Grant et al., 2020). This measure uses a 3-point scale (never or hardly ever, sometimes, a lot) to evaluate an adolescent’s perspective on their perceived availability of social support across multiple settings (home, school, and an additional protective setting outside of their home and school where they spend the most time). Example items include, “Someone helps me when things go wrong”, “someone helps me to not give up”, “someone shows me that good can come from bad”, “someone gives me good advice”, “someone knows what is going on with me”, “someone helps me develop a faith or philosophy”, and “I learn what to do with something I can’t change.” The overall sum score across settings was used. In the present sample, internal consistency for social support was very high indicated by a Cronbach's alpha of .98.

### **Analytical Plan**

The current study was a cross-sectional design to observe if several factors affect an individual's likelihood to demonstrate signs of PTG when confronted with bereavement at one specific point in time. It was hypothesized that bereavement type, nature of the relationship with the deceased, coping styles and social support would positively predict PTG and interact with bereavement to predict additional growth. To test these hypotheses, multiple regression models were assessed using IBM SPSS Statistics Software for Mac, Version 1.0.0. Predictor variables assessing bereavement type and relationship with the deceased were dummy coded before being entered into the regression model. That is, first-degree relatives and close friends were coded with a value of 1 (e.g., mom, dad, sister, brother), and other relationships (e.g., aunt, uncle, pastor, teacher) were coded with a value of 0 based on qualitative descriptors of participant responses. Furthermore, sudden and violent bereavement experiences were coded as 1 (i.e., accident/disaster, murder) and other forms of bereavement were coded as 0 (i.e., sickness/disease, elderly age). A hierarchical linear regression approach was used to determine best-fitting models for PTG.

## Chapter III: Results

### Preliminary Analyses and Descriptive Statistics

Frequencies were generated on main study variables including bereavement and PTG. A total of 176 adolescents (47.2%) experienced no loss to bereavement, 121 participants (32.4%) lost one person to bereavement and 53 adolescents (14.2%) in the sample lost two individuals to bereavement. Less than 5% of the sample lost between three to five loved ones to bereavement. Adolescent participants experienced various types of losses. This includes 98 participants (26.3%) losing someone to sickness or disease, 56 participants (15%) losing someone because of elderly age, 24 participants (6.4%) losing someone as a result of dying in an accident and/or disaster, 17 adolescents (4.6%) losing someone to murder, and 14 participants (3.8%) losing a loved one to suicide. These bereavement experiences were reflective of personal relationships in which 150 participants (40.2%) lost an adult family member (e.g., father, uncle), five participants (1.3%) lost an adult who was not family (e.g., teacher, coach), five participants (1.3%) lost a family member who was not an adult (e.g., little sister), and 69 adolescents (18.5%) lost a friend/boyfriend/girlfriend. In terms of PTG, 311 participants (76.2%) identified signs of PTG at the time of data collection.

Bivariate correlation analyses were conducted to assess associations among study variables, including demographic variables (i.e., age, race/ethnicity, and gender). See Table 1. Results revealed a significant positive relationship between bereavement and PTG ( $r(309) = .13, p = .02$ ). The type of loss participants experienced was also significantly positively correlated with bereavement ( $r(371) = .53, p < .001$ ) indicating that a more sudden and/or violent loss was more likely to have occurred for those who

reported bereavement. In addition, social support, and active coping were each significantly and positively associated with PTG ( $r(304) = .33, p < .001$ ;  $r(298) = .29, p < .001$ ). In contrast to prior research, rumination was not significantly associated with PTG ( $r(296) = .02, p = .69$ ). Active coping was also positively correlated with social support ( $r(339) = .34, p < .001$ ) and negatively correlated with rumination ( $r(339) = -.26, p < .001$ ). Interestingly, social support was negatively associated with a sudden/violent loss ( $r(365) = -.13, p = .01$ ). Demographic variables of age and race/ethnicity were significantly associated with specific study variables. Results showed that age was negatively correlated with PTG ( $r(308) = -.14, p = .01$ ) and positively correlated with losing a first-degree relative or friend to death ( $r(369) = .13, p = .01$ ). Identifying as African American/Black was significantly positively associated with bereavement ( $r(370) = .11, p = .04$ ), PTG ( $r(308) = .12, p = .04$ ) and social support ( $r(365) = .16, p < .001$ ). In contrast, identifying as European American/White was negatively correlated bereavement ( $r(370) = -.13, p = .01$ ), PTG ( $r(308) = -.13, p = .03$ ) and social support ( $r(365) = -.11, p = .04$ ). There was also a significant negative correlation between age and identifying as African American/Black ( $r(369) = -.12, p = .02$ ). Furthermore, there was a positive correlation between identifying as Native Hawaiian or Other Pacific Islander and rumination ( $r(339) = .11, p = .05$ ) and losing a first-degree relative or friend to death ( $r(370) = .15, p < .001$ ). Conversely, those who identified as Hispanic/Latinx were negatively associated with losing a first-degree relative or friend to death ( $r(370) = -.10, p = .04$ ). Reporting a sudden/violent loss was also positively correlated with participants identifying a American Indian or Alaskan Native ( $r(370) = .28, p < .001$ ). Social support

was also significantly positively associated with a bi-racial or multiracial identity ( $r(365) = -.12, p = .02$ ).

### **Primary Analyses**

**Hypothesis 1:** Bereavement will significantly predict PTG.

A simple linear regression model was used to test Hypothesis 1. Bereavement was entered as the predictor along with controls for demographic variables (i.e., age, race/ethnicity, and gender). PTG served as the outcome variable within the regression model. Results revealed that the overall model was significant and bereavement ( $\beta = .12, p=.04$ ) was significantly and positively associated with PTG, meaning that for every one-unit standard deviation increase in total bereavement, PTG increased by 1.14 units (See Table 2). Results also showed that age was negatively associated with PTG. Specifically, for every one-unit standard deviation increase in age, PTG decreased by .61 units.

**Hypothesis 2:** Experiencing a sudden and violent loss will predict higher levels of PTG as compared to seemingly "natural" deaths. Furthermore, experiencing a sudden and violent loss will interact with bereavement to predict additional PTG.

To test Hypothesis 2, the regression model that was used to test Hypothesis 1 was re-run including type of bereavement. The overall model was not significant ( $F(12, 296)=1.85, p= .04, \text{adj. } R^2=.03$ ). There also was no main effect for type of bereavement ( $\beta = 0.00, p=.97$ ) on PTG. Results also indicated that the interaction between sudden and/or violent bereavement type and bereavement did not make a significant contribution to the regression model ( $\beta = .06, p= 0.52$ ) when controlling for age, race/ethnicity, and gender (See Table 3). Therefore, the null hypothesis was not rejected.



**Hypothesis 3:** Adolescents who reported losing a first-degree relative or friend will report greater levels of PTG compared to youth who have experienced a loss of a second degree relative or other adult (non-relative). Furthermore, losing a first-degree relative or friend will interact with bereavement to predict additional PTG.

To test Hypothesis 3, another regression was conducted including bereavement and an interaction between bereavement and the relationship with the deceased (See Table 4). The overall model including the interaction between bereavement and relationship to the deceased was not significant ( $F(12, 296) = 2.15, p = .01, \text{adj. } R^2 = .04; \beta = 0.1, p = .23$ ) (See Table 4). There also was no main effect for the relationship to the deceased on PTG ( $\beta = -0.09, p = .13$ ). Results also revealed that the interaction between bereavement and the relationship to the deceased did not make a significant contribution to the regression model ( $\beta = .1, p = .23$ ) when controlling for age, race/ethnicity, and gender. Results indicated the null hypothesis was not rejected.

**Hypothesis 4:** Adolescents who have the perceived availability of social support will report higher levels of PTG. Furthermore, social support will interact with bereavement to predict higher levels of PTG.

To test Hypothesis 4, an additional regression model was run including bereavement and an interaction between bereavement and social support. Results showed that the overall model was not significant ( $F(12, 293) = 4.23, p < .001, \text{adj. } R^2 = .11$ ). However, the main effect for social support was significant ( $\beta = .29, p < .001$ ), accounting for 14.9% of the variance in PTG when including bereavement as a predictor as well as controlling for age, race/ethnicity, and gender. Results also showed that the interaction between bereavement and social support did not make a significant

contribution to the regression model ( $\beta = 0.00, p=1$ ) when controlling for age, race/ethnicity, and gender. Results indicate partial support for the hypothesis that social support will predict PTG.

**Hypothesis 5:** Adolescents who engage in a) active coping, and b) rumination will report higher levels of PTG. Furthermore, each of these coping strategies will interact with bereavement to predict higher levels of PTG.

To assess Hypothesis 5a, another regression model was tested including bereavement and an interaction between bereavement and active coping. The overall model fit was nonsignificant ( $F(12, 287)=4.11, p<.001; , \text{adj. } R^2=.11$ ). However, there was a significant main effect for active coping on PTG ( $\beta = .28, p = <.001$ ), accounting for 14.5% of the variance in PTG when including bereavement as a predictor as well as controlling for age, race/ethnicity, and gender. The interaction between bereavement and PTG did not make a significant contribution to the regression model ( $\beta = .04, p = .51$ ). Results provide partial support for the hypothesis that active coping will predict PTG.

To test Hypothesis 5b, another regression model was assessed for model fit including bereavement and an interaction between bereavement and rumination. The overall model was not significant ( $F(12, 285)=1.75, p=.06, \text{adj. } R^2=.03$ ) when controlling for age, race/ethnicity, and gender. The main effect for rumination on PTG was not significant ( $\beta = .01, p= .81$ ). In addition, the interaction between bereavement and rumination was not significant ( $\beta = 0.00, p = .98$ ). Therefore, the null hypothesis was not rejected.

## Chapter IV: Discussion

The purpose of this study was to shed light on factors related to PTG among bereaved adolescents living in urban areas within the United States. Four primary research questions were of interest: 1) Does bereavement predict post-traumatic growth?, 2) Does experiencing a sudden/violent loss (versus a seemingly "natural" loss) predict post-traumatic growth?, 3) Does an individual's relationship with the deceased predict posttraumatic growth?, 4) Which coping styles predict posttraumatic growth? Archival data sets were used in order to gain access to study measures and carry out statistical analyses. The analytical approach involved assessing multiple regression models to test these four focal hypotheses that were partially supported.

### **Bereavement and PTG**

Results of analyses testing hypothesis 1 revealed that bereavement experiences were significantly associated with PTG scores, such that adolescents who reported higher levels of death-related losses also reported high levels of PTG. The present study aligns with previous research suggesting that PTG is possible following difficult times in life and builds upon prior research by extending those findings to urban youth. The loss of a loved one can provide the context for PTG, such as a changed self-perception, a greater appreciation of life, and a possible gateway to new relationships (Calhoun, et al., 2010). Experiencing the death of a loved one has the potential to shatter an individual's assumptions and beliefs, which then requires rebuilding efforts to make room for possible growth (Calhoun, et al., 2010). Research also points out that distress and PTG can occur simultaneously (Calhoun et al., 2010), which emphasizes the importance to not only consider negative outcomes following trauma and loss, but to also be aware of its ability

to contribute to growth outcomes in trauma survivors. Future longitudinal research is warranted among bereaved urban adolescents to assess for possible PTG across multiple timepoints.

### **Sudden/Violent Losses and PTG**

Regarding Hypothesis 2, which stated that experiencing a sudden and violent loss would interact with bereavement to predict additional PTG was not supported. In contrast to findings for the first hypothesis and previous research with adults suggesting there is greater potential for growth following an unexpected and violent death of a loved one (Tedeschi & Calhoun, 2006), this type of loss did not make a significant contribution to the outcome measure of PTG. One explanation could be that growth may take longer to achieve following the harsh impact of bereavement subsequent to sudden and violent death. Compared to the death of loved ones from natural causes, research has shown that the road to recovery seems to be more prolonged with violent death experiences (Kristensen et al., 2012). From there being a higher likelihood of developing posttraumatic stress disorder (Breslau et al., 1998; Van Ameringen et al., 2008) to more persistent depressive symptoms (Brent et al., 2009; Kaltman & Bonanno, 2003), the very nature of these abrupt losses could slow growth outcomes.

Relatedly, in more natural deaths, the anticipation of the loss could allow for PTG processes (e.g., making sense of the loss) to begin much sooner (Davis, Nolen-Hoeksema, & Larson, 1998). For example, in a longitudinal study of older adults, respondents whose loved one's death was knowingly close, were more likely to report higher rates of making sense of the loss compared to previous studies of the suddenly and unexpectedly bereaved (Davis et al., 1998). This may hold implications for the current

sample of adolescents as participants may feel less equipped to report positive changes with losses that caught them off guard. Cognitive rebuilding is needed with sudden and violent losses to aid in shattered assumptions (Calhoun et al., 2010), and these processes require time. Additional research is warranted to determine whether youth who experience sudden or violent losses experience PTG at a slower rate and whether loss expectancy catalyzes PTG earlier.

### **Relationship with the Deceased and PTG**

The hypothesis that the association between bereavement and PTG would be significantly moderated by adolescents' relationship with the deceased was not supported. This finding contradicts prior research suggesting that losing first-degree relatives to death may contribute to higher PTG scores than second-degree relatives, with notable differences in the Appreciation of Life, Spiritual Change, and Relating to Others domains of PTG. (Hirooka et al., 2017). One possible reason for this unexpected finding may be related to the types of relationships that constitute first-degree or second-degree relatives. As mentioned earlier, a first-degree relative is defined as a close blood relative, such as an individual's parent, sibling, partner, or child (Armstrong & Shakespeare-Finch, 2011). A second-degree relative includes blood relatives that are less closely related, such as aunts, grandparents, and cousins (Armstrong & Shakespeare-Finch, 2011). Although second-degree relatives may be considered distant relatives for some individuals, these relationships are often as close as relationships with first-degree relatives among racial and ethnic minority groups. Families from these groups tend to be more likely to move beyond nuclear family structures to embrace extended family support (Baker, Silverstein, & Putney, 2008). For example, 10% of White youth live with an extended relative,

compared with 25% of Black, 24% of Hispanic, and 20% of Asian adolescents (Kreider & Ellis, 2011, as cited in Cross, 2018;). Given the value and importance of extended family structures, future research with ethnically diverse young people should incorporate second-degree relatives as a potential primary predictor variable of PTG. The fact that prior findings in this area were connected with specific PTG subscales also suggests that future research should examine relationship to the deceased in relation to PTG subscales within urban adolescent samples as well.

### **Coping Strategies, Social Support, and PTG**

Analyses testing the final hypotheses assessed the potential protective role of active coping, social support, and rumination on PTG outcomes. Findings revealed that both social support and active coping significantly predicted PTG scores. Findings also indicated that active coping and social support explained the greatest amount of variance in comparison to the other predictor variables with active coping accounting for 14.7% and social support accounting for 14.9% of the variance in posttraumatic growth (though neither strategy interacted with bereavement to predict additional PTG).

As previously described, active coping strategies have been shown to cultivate positive growth in minority adolescents (Aldridge & Roesch, 2008). These strategies involve direct problem-solving, seeking understanding, cognitive decision-making and cognitive restructuring (Ayers, Sandier, West, & Roosa, 1996). These coping strategies are reflective of constructive efforts to manage a stressor, which could be helpful during the schema reconstruction process connected with PTG. Since schema reconstruction is essential in determining how much PTG occurs (Tedeschi & Calhoun, 2004), active

cognitive and behavioral coping methods may serve as effective tools for growth to take place.

The findings for social support are also consistent with prior research. Tedeschi and Calhoun (2004) argued that supportive relationships can foster PTG by providing additional perspectives about the changes that occurred in an individual's life. Social support is not only involved in schema change (Tedeschi & Calhoun (2004) but can also provide comfort and reassurance especially when provided by others who have "been there" as there may be a greater willingness to hear their point of view (Tedeschi & Calhoun, 1993).

Unexpectedly, rumination was not significantly associated with PTG. Although rumination may allow for positive reinterpretation of the traumatic event (Meyerson et al., 2011), rumination can also create grounds for prolonged distress (Eisma & Stroebe, 2017). This may include greater engagement in counterfactual thinking, interference with the ability to problem-solve, and intensifying negative emotions and cognitions related to oneself, the world, and the future (Eisma & Stroebe, 2017). Research also suggests that ruminations that are mostly intrusive and negative may lead to low levels of growth (Calhoun, Cann, Tedeschi, & McMillan, 2000). Thus, future studies should consider further examination of the different types of rumination on PTG following the death of a loved one.

### **Findings Based on Demographic Variables**

Beyond results connected to study hypotheses, several notable findings emerged for two of the demographic variables that were included as controls (i.e., age, race/ethnicity). Interestingly, there was a negative association between age and PTG,

suggesting that an increase in participant's age may lead to a decrease in signs of PTG. The literature on the relationship between age, loss, and PTG is seemingly mixed. In a similar study involving PTG among a sample of predominantly Hispanic adolescents, Milam, Ritt-Olson, and Unger (2004) found that high levels of PTG were significantly associated with higher levels of age. The researchers attributed this finding to the possibility that younger adolescents may be less likely to derive meaning or perceive benefits from traumatic events due to being less able to exert control over their environment. In a study with older adults, Linley and Joseph (2004) raised a counterpoint that older people may be more concerned with their own death, which could lead to lesser reports of growth outcomes. This argument may also apply to the context of disadvantaged urban communities, given their higher likelihood of experiencing uncontrollable stressors. Living in an environment that is prone to unpredictable violence may lead older adolescents to come to the realization that they are less in control of their lives. Furthermore, urban adolescents may have a limited capacity to think about the silver lining of experiencing trauma and loss due to greater preoccupation with the complex challenges facing their family, community, and society.

An alternative explanation for these findings is suggested by some of the other variables associated with age in this study. Preliminary findings also revealed a significant positive correlation between age and losing a first-degree relative or friend to death and a significant negative correlation between age and being African American/Black. Identifying as African American/Black were positively associated with PTG and negatively associated with European American/White adolescents (discussed further below). So, it could be that the association between age and PTG is confounded



with the associations between age and an adolescent's relationship with the deceased and between age and race/ethnicity. Additional research is needed to test the competing explanations offered here for the unexpected effects of age on PTG found in this study.

There is a seemingly limited number of studies examining the relationship between race/ethnicity and growth (Meyerson et al., 2011). As indicated above, however, a positive correlation was found between identifying as African American/ Black and PTG. This finding is consistent with one study that found that young African American cancer survivors were more likely to shift the perspective of their illness into a more positive outlook (Phipps, Long, & Ogden, 2007). In another study examining reports of PTG among African American adolescents coping with their parents' cancer diagnosis and treatment, adolescents were able to take into account positive changes within themselves while describing their devastation (Kissil, Niño Jacobs, Davey, & Tubbs, 2010). Although these referenced studies are within the context of cancer-related distress, the results of this study are consistent with their findings and suggest that positive outcomes in the midst of adversity are possible among African American/Black adolescents. Future research should take a closer look at the role of race-related trauma among historically oppressed communities to further understand the processes of PTG among African American/Black youth.

Further, although African American youth have been shown to be more likely to report growth outcomes in response to trauma and stress, results of the current study demonstrated a significant negative correlation between European/White adolescents and PTG and social support. In reference to the previous study of African American youth coping with their cancer diagnosis, Phipps et al. (2007) mentioned that African American

youth in their study reported more growth than their European American counterparts. These findings as well as the results of the current study may reflect cultural differences (i.e., individualistic versus collectivistic values). While individuals of European American descent have historically been shown to uphold individualistic values, collectivist orientations are particularly salient in African American and other racial and ethnic minority groups (Coon & Kemmelmeier, 2001). As mentioned previously, social support systems are related to PTG outcomes, therefore European American youth may be less likely to experience PTG due to being more oriented to individualism. Additional research is needed to test these hypothesized explanations.

Values associated with African American culture, such as religiosity/spirituality, and social support have been shown to predict post-traumatic growth (Meyerson et al., 2011). Results of the present study revealed that identifying as African American/Black and biracial/multiracial were significantly and positively associated with social support. The African American community has been shown to access and depend on a large network of individuals for support when experiencing the death of a loved one and other life tragedies. This includes family members, friends, neighbors, and other informal helpers (Laurie & Neimeyer, 2008; Rosenblatt & Wallace, 2013). African American youth have been shown to utilize various people for support, but family members appear to be one of the most salient sources of support (Larson, Richards, Sims, & Dworkin, 2001; McMahon, Felix, & Nagarajan 2011). Since social support systems are valued and relied on within the African American/ Black community, future studies should examine the types of social support that are most helpful to the process of posttraumatic growth following bereavement. The finding that social support is also positively associated with

biracial/multiracial adolescents further emphasizes the importance of understanding how social environments may promote the development of PTG among racially and ethnically diverse youth.

Identifying as African American/Black was also significantly and positively associated with bereavement whereas identifying as European/White was negatively associated with bereavement in the present study. Few studies offer insight into the bereavement experiences of African American adolescents, but studies available have shown how they are more likely to experience homicidal bereavement and traumatic losses (Burke, Neimeyer, & McDevitt-Murphy, 2010; Johnson, 2010; Smith & Patton, 2016). Research has shown that losses due to homicide are more prevalent in African American communities than European Americans (McDevitt-Murphy, Neimeyer, Burke, Williams, & Lawson, 2012). Therefore, have made it more likely for African American/Black individuals to experience sudden and unexpected deaths of loved ones.

In addition to African American/Black adolescents experiencing the highest homicide rates, disparities in mortality also exist for other racial and ethnic minority groups. Another notable demographic variable correlation in the present study was that identifying as American Indian/Alaskan Native (AI/AN) was positively associated with reporting a sudden/violent loss. Prior research has noted that American Indian and Alaska Native communities have the highest suicide rate of any ethnic group (Pumariega & Sharma, 2018). Death by suicide can not only be sudden and unexpected, but also violent in some cases. In addition to experiencing suicidal losses, AI/AN communities are twice as likely to develop PTSD from traumatic life events (Bassett, Buchwald, & Mason, 2014). Since extensive trauma can produce higher levels of growth, the routes to

posttraumatic growth should be further examined in American Indian and Alaska Native populations. Future research should continue examining racial differences and distinguish the types of losses adolescents experienced such as deaths that may be considered traumatic and unexpected (e.g., accidental, suicidal, homicidal) anticipated (e.g., disease or chronic illness) and those that may be viewed as more natural (e.g., elderly relative). Understanding bereavement experiences across racial and ethnic minority groups is beneficial to assess trends and cultural differences.

Racial and ethnic differences were also present in findings related to an adolescent's relationship to the deceased. As mentioned previously, first-degree relatives include parents, siblings, and children whereas second-degree relatives can include grandparents, grandchildren, uncles, aunts, nephews, nieces, and half-siblings. Interestingly, adolescents identifying as Hispanic/Latinx in the current sample were negatively associated with losing a first-degree relative or friend to death. Research regarding bereavement experiences among Hispanic/Latinx youth populations are very limited. Although little is known about death-related losses among Hispanic/Latinx adolescents, it has been shown that it is more common for them to experience the loss of a parent (i.e., first degree relative) due to incarceration (Smyke et al., 2017). In a representative study of bereaved racial and ethnic minority youth, Hispanic/Latinx adolescents were also less likely to report losing a family member or friend in comparison to African American/Black adolescents (Resnick, 2004). A future study may consider comparing bereavement and non-bereavement related losses among Hispanic/Latinx adolescents to assess for potential differences in PTG outcomes.

Native Hawaiian/Pacific Islander adolescents in this study were significantly and positively associated with losing a first-degree relative or friend to death. As previously stated, literature on culture-specific bereavement experiences is scarce. However, literature continues to reiterate the importance of family members and extended relatives across racial and ethnic minorities. For Native Hawaiian and Pacific Islander communities, a family or “ohana” can include both blood-related and unrelated individuals (Daily et al., 2020). The family unit or “ohana” serves as a strong source of support for the bereaved (Ushiroda, 2008). Future research should continue to explore bereavement experiences among Native Hawaiian/Pacific Islander adolescents as well as assess the role of family support on PTG outcomes.

Native Hawaiian/Pacific Islander adolescents were also significantly and positively associated with a rumination coping style in the present study. Little is known about the specific coping styles among Native Hawaiian/Pacific Islander adolescents, but rumination tends to be more common among adolescents bereaved by suicide (Andriessen, 2018). Additional research is needed to further understand the specific coping styles of Native Hawaiian/Pacific Islander adolescents during stressful and traumatic events, including bereavement.

Finally, no support was found for any of the moderation hypotheses. In other words, none of the variables interacted with bereavement to account for additional variance in PTG. This may mean that each of the variables (beyond bereavement) that were significantly associated with PTG (active coping, social support, age, race/ethnicity) is associated with PTG independent of the context of bereavement. As reviewed above, each of these variables has been associated with positive outcomes (independent of

trauma) in prior research. Conversely, the very nature of the PTG measure (which requires exposure to a traumatic experience) suggests that, at the very least, the context of some form of trauma was integral to the current results. Therefore, an alternative explanation for the lack of interaction effects is that this study was under powered to test moderation given that moderation analyses typically require larger sample sizes than those testing simply for main effects (Memon et al., 2019). Additional research with larger samples is needed to test these competing explanations.

### **Limitations and Future Directions**

Beyond the limited sample size for testing of moderation, results of this study should be interpreted with several limitations in mind. Time 1 data were used for all measures. Thus, the cross-sectional nature of the study provided only a snapshot of the population at one point in time. For instance, since adolescents' reports of PTG were only assessed at Time 1, the study could not assess possible change in growth scores over time. Unlike longitudinal studies, no causal relationships can be determined from this study. All measures were also evaluated using self-report only, which limits the objectivity of the research. Future research should incorporate PTG ratings from other individuals within an adolescents' environment. This may help provide additional evidence and/or support toward their reported growth outcomes following trauma and loss. Follow-up studies should also aim to delve into the PTG subscales (i.e., Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation of Life) in relation to bereavement as only PTG total scores were used in the present study. The values of internal consistency (scale reliability) obtained in this study should also be interpreted with caution. There was limited internal consistency for our measure of active

coping, which reduces confidence in the results for active coping. In addition, there was a very high degree of internal consistency for our measure of social support, which could indicate systematic errors and/or reliability of the scale being overestimated (Shevlin, Miles, Davies, & Walker, 2000; Trizano-Hermosilla & Alvarado, 2016). Future research should seek to replicate these findings with measures of active coping and social support that have demonstrated strong internal consistencies within participating samples.

### **Summary**

In spite of the limitations, the present study contributes to the literature in meaningful ways. In contrast to existing research, the current study involved a relatively large sample of urban adolescents from different racial and ethnic backgrounds. Prior research on PTG has mostly been conducted with adults and adolescents from specific populations (e.g., adolescent girls, specific racial and ethnic minority groups, and adolescents residing outside of the United States). The present study addressed that limitation in the literature by using a representative sample, which reflects characteristics of a larger and more diverse group. The present study also sought to further understand bereavement from a strengths-based perspective and results provide additional support that positive outcomes are possible following hardship due to the death of a loved one. Associations were found between bereavement and PTG; however, this should not be the default assumption for urban youth who are not only navigating bereavement experiences, but many other day-to-day and complex stressors that are often beyond their control.

Results also suggest there should be continued exploration into factors related to growth outcomes among urban adolescent populations. Overall, results indicate the need

to further understand the story behind a person's loss to understand the outcome of PTG. Bereavement type, relationship with the deceased, coping strategies, and the perceived availability of social support were the focus of this quantitative study, but a qualitative analysis of bereaved adolescents, may provide a richer picture of the loss experience and protective factors associated with reports of positive changes.

With all of these things considered, life does indeed go on after the storm. Be that as it may, greater knowledge and awareness of one's personal and contextual assets are needed to better understand an adolescents' ability to reconstruct the meaning of bereavement in a positive light.



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## Appendix

Table 1

*Bivariate Correlations Among Study Variables*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. PTG																	
2. Bereavement	.13*																
3. Bereavement-Sudden/Violent	.05	.53**															
4. First-degree relative or friend	-.07	-.04	0.1														
5. Social Support	.33**	.08	-.13*	-.07													
6. Rumination	.02	-.03	.04	.08	-.05												
7. Active Coping	.29**	.00	-.06	.05	.34**	-.26**											
8. Age	-.14*	.03	.07	.13**	-.09	-.05	-.03										
9. Gender	-.01	.00	.03	-.07	.03	-.09	.02	.03									
10. Hispanic/Latinx	-.00	-.02	.06	-.10*	-.07	-.06	.01	.07	.09								
11. African American/Black	.13*	.11*	.04	-.10	.16**	.04	-.01	-.12*	-.01	-.35**							
12. European/White	-.13*	-.13*	-.04	.08	-.11*	-.01	-.03	.08	-.06	.37**	-.55**						
13. Asian/Asian American	.02	-.06	-.09	-.03	.07	-.03	.05	-.02	-.03	-.24**	-.25**	-.26**					
14. American Indian/Alaskan Native	-.01	0.1	.28**	.02	-.06	.01	-.00	.07	.06	.08	-.08	-.08	-.04				
15. Native Hawaiian/Pacific Islander	.06	.01	-.03	.15**	.10	.11*	.03	-.02	.02	.02	-.05	-.06	-.03	-.01			
16. Bi-Racial/Multiracial	-.01	.05	.01	.01	-.12*	-.03	.01	.05	.10	.15**	-.32**	-.34**	-.15**	-.05	-.03		
17. Other	-.10	-.02	-.02	.00	-.08	-.03	-.04	.03	-.02	.45**	-.24**	.47**	-.15**	-.05	.07	-.17**	

*Note.* Gender variable was dummy coded, 0=Female and 1=Male

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).



Table 2

*Hypothesis 1 Result*

Variable	B	SE B	$\beta$	p	R	Adjusted R
Model 1:					.05	.03
Hispanic/ Latinx	2.24	1.28	.12	.08		
African American/ Black	2.76	1.38	.15	.05		
Asian/Asian American	2	1.91	.07	.3		
American Indian/ Alaskan Native	.03	5	0	1		
Native Hawaiian/ Pacific Islander	9.45	6.93	.08	.17		
Bi-Racial/Multiracial	.42	1.61	.02	.79		
Other	-2.85	1.75	-.11	0.1		
Gender	-.3	1.02	-.02	.77		
Age	-.61	.27	-.13	.02		
Model 2:					.07	.04**
Hispanic/ Latinx	2.25	1.27	.12	.08		
African American/ Black	2.34	1.38	.12	.09		
Asian/Asian American	1.93	1.9	.07	.31		
American Indian/ Alaskan Native	-1.28	5	-.02	.8		
Native Hawaiian/ Pacific Islander	9.06	6.89	.07	.19		
Bi-Racial/Multiracial	.03	1.62	0	.99		
Other	-3.04	1.74	-.12	.08		
Gender	-.27	1.02	-.02	.7		
Age	-.63	.27	-.13	.02		
Bereavement	1.14	.53	.12	.03		

Note. \*B = unstandardized regression coefficient on centered variable,  $\beta$  = standardized regression coefficient, SEB = Standard error of the unstandardized regression

Table 3

*Hypothesis 2 Results*

Variable	B	SE B	$\beta$	p	R	Adjusted R
Model 1					.07	.03
Hispanic/ Latinx	2.25	1.28	.12	.08		
African American/ Black	2.34	1.39	.12	.09		
Asian/Asian American	1.94	1.91	.07	.31		
American Indian/ Alaskan Native	-1.3	5.04	-.02	.8		
Native Hawaiian/ Pacific Islander	9.07	6.91	.07	.19		
Bi-racial/multiracial	.03	1.62	0	.99		
Other	-3.04	1.74	-.12	.08		
Gender	-.27	1.02	-.02	.8		
Age	-.63	.27	-.13	.02		
Bereavement	1.13	.6	.12	.06		
Sudden/violent bereavement	.05	1.55	0	.97		
Model 2					.07	.03
Hispanic/ Latinx	2.2	1.28	.12	.09		
African American/ Black	2.34	1.39	.12	.09		
Asian/Asian American	1.91	1.92	.07	.32		
American Indian/ Alaskan Native	-1.59	5.07	-.02	.76		
Native Hawaiian/ Pacific Islander	9.16	6.92	.08	.19		
Bi-racial/multiracial	.05	1.62	0	.98		
Other	-3.05	1.74	-.12	.08		
Gender	-.24	1.02	-.01	.82		
Age	-.63	.27	-.14	.02		
Bereavement	.92	.68	.1	.18		

Sudden/violent bereavement	-.64	1.89	-.03	.74
Bereavement x sudden/violent bereavement	.93	1.44	.06	.52

*Note.* \*B = unstandardized regression coefficient on centered variable,  $\beta$  = standardized regression coefficient, SEB = Standard error of the unstandardized regression

Table 4

*Hypothesis 3 Results*

Variable	B	SE B	$\beta$	p	R	Adjusted R
Model 1					.05	.03
Hispanic/ Latinx	2.24	1.28	.12	.08		
African American/ Black	2.76	1.38	.15	.05		
Asian/Asian American	2	1.91	.07	.3		
American Indian/ Alaskan Native	.03	5	0	1		
Native Hawaiian/ Pacific Islander	9.45	6.93	.08	.17		
Bi-Racial/Multiracial	.42	1.61	.02	.79		
Other	-2.85	1.75	-.11	.1		
Gender	-.3	1.02	-.02	.77		
Age	-.61	.27	-.13	.02		
Model 2					.08	.04
Hispanic/ Latinx	2	1.28	.11	.12		
African American/ Black	2.16	1.38	.12	.12		
Asian/Asian American	1.65	1.91	.06	.39		
American Indian/ Alaskan Native	-.61	5.01	-.01	0.9		
Native Hawaiian/ Pacific Islander	11.12	7	.09	.11		
Bi-Racial/Multiracial	.07	1.61	0	.97		
Other	-3.14	1.73	-.12	.07		
Gender	-.37	1.02	-.02	.72		
Age	-.6	.26	-.13	.02		
Bereavement	1.37	.55	.15	.01		
First degree relative/friend	-2.42	1.58	-.09	.13		
Model 3					.08	.04
Hispanic/ Latinx	1.97	1.28	.11	.13		
African American/ Black	2.2	1.38	.12	.11		
Asian/Asian American	1.73	1.91	.06	.36		

American Indian/ Alaskan Native	-1.68	5.09	-.02	.74
Native Hawaiian/ Pacific Islander	12.31	7.07	.1	.08
Bi-Racial/Multiracial	.09	1.61	0	.96
Other	-3.15	1.73	-.12	.07
Gender	-.34	1.02	-.02	.74
Age	-.59	.27	-.13	.03
Bereavement	1.18	.57	.13	.04
First degree relative/friend	-3.97	2.03	-.15	.05
Bereavement x First degree relative/friend	2.43	2	.1	.23

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*Note.* \*B = unstandardized regression coefficient on centered variable,  $\beta$  = standardized regression coefficient, SEB = Standard error of the unstandardized regression

Table 5

*Hypothesis 4 Results*

Variable	B	SE B	$\beta$	p	R	Adjusted R
Model 1					.05	.03
Hispanic/ Latinx	2.24	1.29	.12	.08		
African American/ Black	2.76	1.38	.15	.05		
Asian/Asian American	.2	1.92	.07	.3		
American Indian/ Alaskan Native	.03	5.02	0	.1		
Native Hawaiian/ Pacific Islander	9.45	6.96	.08	.18		
Bi-Racial/Multiracial	.42	1.62	.02	.8		
Other	-2.85	1.75	-.11	.11		
Gender	-.3	1.03	-.02	.77		
Age	-.61	.27	-.13	.02		
Model 2					.15	.12
Hispanic/ Latinx	1.93	1.23	.11	.12		
African American/ Black	1.56	1.34	.08	.25		
Asian/Asian American	1.12	1.84	.04	.54		
American Indian/ Alaskan Native	.43	4.83	.01	.93		
Native Hawaiian/ Pacific Islander	5.28	6.67	.04	.43		
Bi-Racial/Multiracial	.62	1.56	.03	.69		
Other	-2.49	1.67	-.1	.14		
Gender	-.47	.98	-.03	.64		
Age	-.54	.26	-.12	.04		
Social Support	.06	.01	.29	< .001		
Bereavement	.93	.51	.1	.07		
Model 3					.15	.11
Hispanic/ Latinx	1.94	1.23	.11	.12		
African American/ Black	1.55	1.34	.08	.25		
Asian/Asian American	1.12	1.84	.04	.55		

American Indian/ Alaskan Native	.43	4.88	.01	.93
Native Hawaiian/ Pacific Islander	5.28	6.68	.04	.43
Bi-Racial/Multiracial	.62	1.56	.03	.69
Other	-2.49	1.68	-.1	.14
Gender	-.47	.98	-.03	.64
Age	-.54	.26	-.12	.04
Social Support	.06	.01	.29	< .001
Bereavement	.93	.51	.1	.07
Bereavement x Social Support	-7.00E-05	.01	0	1

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*Note.* \*B = unstandardized regression coefficient on centered variable,  $\beta$  = standardized regression coefficient, SEB = Standard error of the unstandardized regression

Table 6

*Hypothesis 5a Results*

Variable	B	SE B	$\beta$	p	R	Adjusted R
Model 1					.05	.02
Hispanic/ Latinx	2.24	1.31	.12	.09		
African American/ Black	2.76	1.4	.15	.05		
Asian/Asian American	2	1.95	.07	.31		
American Indian/ Alaskan Native	.03	5.09	0	1		
Native Hawaiian/ Pacific Islander	9.45	7.06	.08	.18		
Bi-Racial/Multiracial	.42	1.65	.02	.8		
Other	-2.85	1.78	-.11	.11		
Gender	-.3	1.04	-.02	.78		
Age	-.61	.27	-.13	.03		
Model 2					.07	.03
Hispanic/ Latinx	2.27	1.3	.12	.08		
African American/ Black	2.34	1.41	.12	.1		
Asian/Asian American	1.96	1.94	.07	.32		
American Indian/ Alaskan Native	-1.31	5.11	-.02	.8		
Native Hawaiian/ Pacific Islander	8.88	7.07	.07	.21		
Bi-Racial/Multiracial	.04	1.65	0	.98		
Other	-3.03	1.77	-.12	.09		
Gender	-.25	1.04	-.01	.81		
Age	-.62	.27	-.13	.02		
Rumination	9.98	42.15	.01	.81		
Bereavement	1.14	.54	.12	.03		
Model 3					.07	.03
Hispanic/ Latinx	2.27	1.3	.12	.08		
African American/ Black	2.34	1.41	.12	.1		
Asian/Asian American	1.95	1.95	.07	.32		



American Indian/ Alaskan Native	-1.33	5.18	-.02	.8
Native Hawaiian/ Pacific Islander	8.88	7.09	.07	.21
Bi-Racial/Multiracial	.03	1.66	0	.99
Other	-3.03	1.78	-.12	.09
Gender	-.25	1.04	-.01	.81
Age	-.62	.27	-.13	.02
Rumination	9.86	42.62	.01	.82
Bereavement	1.14	.54	.12	.03
Rumination x Bereavement	-1.09	50.32	0	.98

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*Note.* \*B = unstandardized regression coefficient on centered variable,  $\beta$  = standardized regression coefficient, SEB = Standard error of the unstandardized regression

Table 7

*Hypothesis 5b Results*

Variable	B	SE B	$\beta$	p	R	Adjusted R
Mode 1					.05	.02
Hispanic/ Latinx	2.24	1.3	.12	.09		
African American/ Black	2.76	1.4	.15	.05		
Asian/Asian American	2	1.94	.07	.3		
American Indian/ Alaskan Native	.03	5.07	0	1		
Native Hawaiian/ Pacific Islander	9.45	7.04	.08	.18		
Bi-racial/multiracial	.42	1.64	.02	.8		
Other	-2.85	1.78	-.11	.11		
Gender	-.3	1.04	-.02	.78		
Age	-.61	.27	-.13	.03		
Model 2					.15	.11
Hispanic/ Latinx	2.02	1.24	.11	.11		
African American/ Black	2.33	1.35	.12	.08		
Asian/Asian American	1.51	1.86	.05	.42		
American Indian/ Alaskan Native	-1.13	4.87	-.01	.82		
Native Hawaiian/ Pacific Islander	7.97	6.71	.07	.24		
Bi-racial/multiracial	.04	1.57	0	.98		
Other	-2.63	1.69	-.1	.12		
Gender	-.37	.99	-.02	.71		
Age	-.59	.26	-.13	.02		
Active coping	59.2	11.62	.28	< .001		
Bereavement	1.12	.51	.12	.03		
Model 3					.15	.11
Hispanic/ Latinx	2.05	1.24	.11	.1		
African American/ Black	2.33	1.35	.12	.09		
Asian/Asian American	1.51	1.86	.05	.42		

American Indian/ Alaskan Native	-1.4	4.9	-.02	.78
Native Hawaiian/ Pacific Islander	7.97	6.72	.07	.24
Bi-racial/multiracial	.07	1.58	0	.96
Other	-2.71	1.7	-.11	.11
Gender	-.34	.99	-.02	.73
Age	-.59	.26	-.13	.02
Active coping	59.64	11.65	.28	< .001
Bereavement	1.09	.51	.12	.03
Bereavement x active coping	7.65	11.54	.04	.51

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*Note.* \*B = unstandardized regression coefficient on centered variable,  $\beta$  = standardized regression coefficient, SEB = Standard error of the unstandardized regression