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Ethnic Identity, Perceived Social Support, and Posttraumatic Growth Following Loss: Quantitative and Qualitative Findings from a University Sample

Jennifer R. Marcus
University of Windsor

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ETHNIC IDENTITY, PERCEIVED SOCIAL SUPPORT, AND POSTTRAUMATIC
GROWTH FOLLOWING LOSS: QUANTITATIVE AND QUALITATIVE FINDINGS
FROM A UNIVERSITY SAMPLE

By

Jennifer R. Marcus

A Dissertation

Submitted to the Faculty of Graduate Studies

through the Department of Psychology

in Partial Fulfillment of the Requirements for

the Degree of Doctor of Philosophy

at the University of Windsor

Windsor, Ontario, Canada

2015

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by

Jennifer R. Marcus

APPROVED BY:

K. Taku, External Examiner
Oakland University, Department of Psychology
Rochester, Michigan

W. Park
Department of Social Work

J. Hakim-Larson
Department of Psychology

B. C. H. Kuo
Department of Psychology

K. Cramer, Advisor
Department of Psychology

February 25, 2015

DECLARATION OF ORIGINALITY

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ABSTRACT

Individuals across cultures can experience both negative and positive outcomes following loss and trauma. Social support and group identity have been found to promote growth following trauma while reducing posttraumatic stress symptoms. Guided by Calhoun and Tedeschi's (2006) conceptualization of posttraumatic growth and the influence of one's ethnic group on growth, the present study aimed to expand previous research by examining the impact of ethnic identity and receiving social support from members of one's ethnic group on posttraumatic growth and posttraumatic stress symptoms following the loss of an important relationship. University students ($N = 183$) who had experienced a recent relationship loss completed self-report measures of posttraumatic growth, posttraumatic stress disorder, ethnic identity, and social support received separately from members of their ethnic group and their general social network. Additionally, participants commented on how their ethnic group helped and hindered their recovery following the loss. Initial results indicated that ethnic identity exploration and ethnic identity commitment were positively correlated with posttraumatic growth. When controlling for important covariates, such as ethnicity and type of loss, ethnic identity exploration remained a significant predictor of growth, but the influence of ethnic identity commitment was no longer significant. It was further hypothesized that social support from one's ethnic group would be a more important predictor of growth than general support. Findings did not support this hypothesis. Finally, as hypothesized, social support from one's ethnic group partially mediated the relation between ethnic identity commitment and posttraumatic growth following loss. Qualitative findings highlighted the primary role of ethnic group members in the recovery process through opportunities

for communication, emotional processing, and gaining a sense of togetherness and belonging. Results suggest that ethnic identity and social support may have an impact on posttraumatic growth, but these were somewhat overshadowed by the relation of ethnicity to posttraumatic growth within the current sample. Further tests of these relations within more diverse populations would contribute greatly to research in this area. Results of the current study inform and guide research and clinical interventions in order to promote positive outcomes following loss and trauma for ethnically diverse individuals.

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TABLE OF CONTENTS

DECLARATION OF ORIGINALITY	iii
ABSTRACT.....	iv
ACKNOWLEDGEMENTS	vi
LIST OF TABLES	xiii
LIST OF FIGURES	xv
LIST OF APPENDICES.....	xvi
CHAPTER I. Introduction	1
CHAPTER II. Literature Review.....	7
Trauma Theory.....	7
Posttraumatic Growth	11
Evolution of posttraumatic growth.	11
Definition of posttraumatic growth.....	13
Models of posttraumatic growth.....	15
Model of life crises and personal growth.....	16
Comprehensive model of posttraumatic growth	17
Factors that influence growth.....	19
Social Support.....	23
Models of recovery through social support	24
Social support and trauma outcomes	29
Social support as a multifaceted concept	34
Community relatedness and trauma.....	37
Individual and Group Identity.....	41
Self-determination theory and identity formation.....	42

Ethnic identity theory.....	44
PTG in Cross-Cultural and Culturally Diverse Contexts.....	48
Ethnicity and posttraumatic growth.....	50
Ethnic identity development as a protective process across ethnic groups	52
The Current Study.....	58
Research question 1.	60
Hypothesis 1.....	60
Research question 2.	62
Hypothesis 2.....	62
Hypothesis 3.....	62
Research question 3.	63
CHAPTER III. Method.....	64
Participants.....	64
Measures	71
Relationship loss identification.....	71
Posttraumatic growth	75
Posttraumatic stress symptoms	78
Ethnic identity.....	80
General social support.....	82
Ethnic social support.....	84
Previous trauma experiences.....	85
Social desirability.....	87
Demographics	87

Perceptions of ethnic group impact.....	88
Procedure	89
Use of web-based data collection	89
Survey procedure	92
CHAPTER IV. Results	95
Quantitative Results	95
Preliminary review of data.....	95
Relationship loss experience.....	97
Descriptive statistics and statistical assumptions.....	97
Hypothesis testing	103
Hypothesis 1.....	103
Analysis 1.....	105
Hypothesis 2.....	109
Analysis 2.....	109
Hypothesis 3.....	110
Analysis 3.....	110
Additional analyses.....	112
Qualitative Results	120
Content analysis	120
Qualitative themes	122
Ethnic group reaction.....	122
Help from ethnic group.....	128
Hindrances from ethnic group	135

Overall trends.....	144
CHAPTER V. Discussion.....	145
Initial Data Review	145
Review of Results	146
Results in Context.....	152
Limitations and Future Directions	169
Clinical Implications.....	175
REFERENCES	178
APPENDICES	206
VITA AUCTORIS	216

LIST OF TABLES

Table 1. <i>Categorical Demographic Information of Participants (N = 183)</i>	65
Table 2. <i>Measures</i>	72
Table 3. <i>Descriptive Statistics for Continuous Variables (N = 183)</i>	99
Table 4. <i>Correlations Between Potential Covariates and Outcome Variables</i>	102
Table 5. <i>Correlations Between All Independent and Dependent Variables</i>	1034
Table 6. <i>Summary of Hierarchical Regression Analysis for Predicting Posttraumatic Growth</i>	106
Table 7. <i>Summary of Hierarchical Regression Analysis for Predicting Posttraumatic Stress Disorder</i>	108
Table 8. <i>Summary of Regression Analysis and Relative Importance of Variables for Predicting Posttraumatic Growth</i>	111
Table 9. <i>Descriptive Statistics for Social Support Subscales and Correlations with Posttraumatic Growth (PTG) and Posttraumatic Stress Disorder (PTSD)</i>	118
Table 10. <i>Correlations and Differences Between Subtests of Social Support</i>	119
Table 11. <i>Content Analysis of Responses to the Question “How did members of your ethnic group react after you experienced the relationship loss?” Number of Responses, Responses by Ethnic Group, and Response Percentages (N = 181)</i>	123
Table 12. <i>Content Analysis of Responses to the Question “In what ways did your ethnic group help you to cope and recover from the relationship loss?” Number of Responses, Responses by Ethnic Group, and Response Percentages (N = 180)</i>	129

Table 13. *Content Analysis of Responses to the Question “In what ways did your ethnic group make it more difficult for you to cope and recover after your relationship loss?” Number of Responses, Responses by Ethnic Group, and Response Percentages (N = 178)*..... 136

LIST OF FIGURES

<i>Figure 1.</i> Path analysis for the indirect relationship of ethnic identity commitment on posttraumatic growth as mediated by ethnic social support.	113
<i>Figure 2.</i> Examination of the effect on posttraumatic growth of the interaction between ethnicity and ethnic identity exploration.....	115
<i>Figure 3.</i> Examination of the effect on posttraumatic growth of the interaction between ethnicity and ethnic identity commitment.....	117

LIST OF APPENDICES

Appendix A: Screening Questionnaire	206
Appendix B: Relationship Loss Questionnaire.....	207
Appendix C: Ethnic Label Questions from Multigroup Ethnic Identity Measure – Revised (MEIM – R)	209
Appendix D: Instructions for Interpersonal Support Evaluation List (ISEL).....	211
Appendix E: Demographic Questionnaire	212
Appendix F: Consent Form.....	213
Appendix G: Post-Study Information Form	215

CHAPTER I

Introduction

The frequency of traumatic or stressful life events in developed and developing nations across the world is consistently high (Weiss & Berger, 2010). Recent research on the occurrence of trauma among Canadians found that 75% of the population will experience at least one traumatic event in their lives. Among Americans, the rate of traumatic events has been reported as high as 90%. Relationship loss represents a specific form of stressor that can impact individuals in many ways, including disrupting their assumptions about the world around them, assumptions about the consistency of relationships, as well as the availability of important supports during times of stress (Harvey, 2002). Though individuals experience similar types of negative events, and are faced with similar stressors, the rate of Posttraumatic Stress Disorder (PTSD) is only 8.7% within the United States and approximately 1% across most parts of Africa, Asia, Europe, and South America (American Psychiatric Association, 2013). The rate of persistent complex bereavement is also quite low, with lifetime prevalence of less than 5% (American Psychiatric Association, 2013). Therefore, there must be a range of outcomes that individuals experience following traumatic and stressful life events. A portion of individuals experience PTSD symptomology, whereas others experience some distress and quickly return to baseline levels of functioning, often referred to as resilience in the face of trauma and distress (Reich, Zautra, & Hall, 2010). Still others can actually experience significant personal and interpersonal gains following trauma and loss, going beyond the level of homeostasis described in resilience research. These outcomes are not mutually-exclusive throughout the lifespan and are often interconnected.

Historically, psychological research has focused on the symptomology and pathology related to stress and trauma. Yet, religions, cultures, and philosophers have espoused the benefits of stress for centuries. Within recent years, empirical research on positive reactions and growth following traumatic events has gained popularity within the field of psychology and mental health through the development of positive psychology as a distinct research area. The experience of growth following trauma has been assigned many names within popular culture and the literature, including “posttraumatic growth,” “stress-related growth,” “meaning making,” and “benefit finding.” Though slightly different meanings are implied by each term, their general implications are the same: a level of value is added to the lives of individuals due to the traumatic event or loss that they have experienced.

Various researchers have developed models of this growth process. For example, Calhoun and Tedeschi (2006) developed the Comprehensive Model of Posttraumatic Growth (PTG) which highlights the importance of an initial period of distress following a stressful life event, in which assumptions individuals hold about themselves and the world around them are shattered. Through the process of rebuilding these assumptions to incorporate the traumatic event, an individual can gain within five domains of functioning: “greater appreciation of life and changed sense of priorities; warmer, more intimate relationships with others; a greater sense of personal strength; recognition of new possibilities or paths for one’s life; and spiritual development” (Tedeschi & Calhoun, 2004, p. 6). Individuals can experience growth in any and all of these areas and this growth can have a large impact on functioning following trauma. This conceptualization of PTG is used to guide the present research on growth following loss.

Individual factors, such as personality, self-efficacy, and optimism have been found to significantly influence PTG and have been incorporated into Calhoun and Tedeschi's (2006) comprehensive model. Yet, they indicate that interpersonal variables, such as social support, are essential to the growth process. Within the Comprehensive Model of PTG, individuals are influenced by those around them in many different ways (Calhoun & Tedeschi, 2006). At a proximal level, individuals process traumatic events and related emotions with others in order to gain an understanding of the event and find meaning in it. Those around them also act as models for appropriate coping behaviour and provide information about how to understand the event within the individual's specific sociocultural environment. This also relates to the more distal influence of others, as each culture or society has norms surrounding trauma, loss, and recovery that influence the growth process.

Research to date has given a large focus to the influence of social support on trauma outcomes. Researchers have found that social support is positively related to PTG and negatively related to PTSD symptomology (Schuettler & Boals, 2011). Yet, inconsistencies have been found within this research. A recent meta-analysis by Prati and Pietrantonio (2009) examined the importance of social support as leading to PTG. An analysis of 103 studies that measured some form of growth after trauma and a variety of forms of social support showed that results are inconsistent. The authors speculate that these results are at least partially due to the broad definition of social support and the many ways that an individual can benefit from the support of others. Social support is too often treated as a unidimensional variable, and the more distal influences of social support and broader culture are not captured within measures of social support. Research

is required that examines the interaction of both proximal and distal aspects of social support within the growth process.

The relevance of PTG across cultures and ethnic groups has been examined to ensure its relevance within a multicultural context. Some differences in conceptualization of PTG have been found, but overall the concept has been found to exist across a wide range of geographical, religious, and ethnic groups. As indicated by Calhoun and Tedeschi (2006), the culture that one exists within influences the growth process to a considerable degree. Within a multicultural setting, such as at a Canadian university, individuals are exposed to varying and sometimes contradictory beliefs about recovery and personal growth, yet there is little research to clarify how cultural influences from both dominant and minority ethnic groups help or hinder the growth process. On a theoretical level, Ryan and Deci's (2000) self-determination theory posits that individuals are constantly exposed to different values and beliefs about the world around them through interactions with others. In order to internalize values that they believe are helpful to them, individuals must experience high relatedness or connection to those who espouse these values. By increasing relatedness in their daily lives individuals increase a sense of security in their identity and relationships and are thereby able to pursue intrinsically motivated goals for personal growth.

The importance of connecting to a cultural group has also been found within research on how cultural influences help to disseminate information about growth opportunities, provide supports in times of need, and offer effective and culturally appropriate coping strategies following stressful events. For example, within research on religious identification, it has been found that the greater connection one feels to a

religious community, the more support they can gain from this community and subsequently the more they can cope with and grow from stressful life experiences (Greenfield & Marks, 2007). Additionally, this support from one's religious group is more influential in the growth process than general social support (Pargament, 2002). Connection to a larger community or cultural group has been studied in relation to religious groups, but it has not been studied in relation to ethnic identity or ethnic groups. Most ethnically diverse studies examine ethnicity as a label and search for cultural differences. Generally they give little focus to the importance of having a strong connection to one's ethnic group and forming an established ethnic identity within the coping process.

The current study examined PTG's relation to ethnic identity, in the form of ethnic identity commitment and ethnic identity exploration. Based on inconsistencies within social support research, the study also expanded on research relating to social support by differentiating between social support received from one's ethnic group and general social support. Quantitative and qualitative methods were used to examine the different relations between social support, ethnic identity, and PTG following a significant interpersonal loss.

In the following sections, relevant theories and research will be discussed. The literature review begins with a summary of trauma theory, leading into a discussion of trauma's contribution to personal growth. Important models of growth following trauma are outlined, including Calhoun and Tedeschi's (2006) Comprehensive Model of Posttraumatic Growth. The concept of PTG is linked to theories and research related to

social support and group identity. Finally, research relating ethnicity and ethnic identity to PTG will be reviewed, leading into a detailed account of the present research.

CHAPTER II

Literature Review

Trauma Theory

A traumatic event can be described as an event that is sudden, unexpected, shocking, and outside one's usual realm of experience (Tedeschi & Calhoun, 1995). Often, individuals feel powerless and that they lack control over their circumstance when events occur. The traumatic nature of the event is enhanced when the consequences of the trauma are long-lasting or irreversible (Tedeschi & Calhoun, 1995). In some conditions, individuals may fear for their physical safety or the safety of others (American Psychiatric Association, 2013). However, not all personally traumatic events involve physical threat. According to many researchers, a wide range of events can have a significant impact on functioning, from combat trauma (Kafko, 2009) to immigration experiences (Weiss & Berger, 2008) and childbirth (Sawyer, Ayers, Young, Bradley, & Smith, 2012). Often, events that are part of everyday experience, but elicit high stress when they occur are referred to as lowercase 't' 'traumas', whereas those significant and large events that are completely outside normal experience are known as uppercase 'T' 'Traumas' (Shapiro, 2001). Further, Kira (2001) states that there are varying types of traumatic experiences ranging in impact, including childhood rejection, combat experiences, and loss of a close relationship. Though these events are different in nature and severity, there are similarities in how an individual can cope and adjust to them. One of the most common 'traumas' experienced is that of relationship loss. Loss can occur in the form of the death of a loved one, breakdown of a romantic relationship or friendship, or forced separation from an important other. These losses can cause disruptions in daily

activities and functioning, availability of social supports, and other important areas of an individual's life. In some of these cases, individuals have some control over the relationship breakdown, but often there are aspects that are out of the individual's control and they feel helpless to act within the loss (Harvey & Miller, 1998).

During the experience of trauma, individuals do not exist or cope in isolation; neither do the traumatic events themselves exist in isolation. Individuals' reactions to trauma are greatly impacted by previous experiences of stress and traumatic events. This concept has been explored extensively in the work of Ibrahim Kira (2001). Kira and colleagues view trauma exposure within a developmental context, thereby classifying trauma experiences based on the developmental stage and function that is disrupted by the event. These functions include attachment traumas, identity and personal traumas, collective traumas, self-actualization or role identity traumas, physical survival or identity traumas, and indirect or secondary traumas. Traumatic events are then further divided based on the temporal impact they have: time limited and individual occurrence (type I), time limited with multiple occurrences (type II), prolonged exposure that did not stop (type III), and the cumulative effects of multiple types of events (type IV). In this way, this developmental-based trauma framework incorporates both the type and dose of the trauma experience. Traumas can further be identified as core traumas, triggering traumas, and peripheral traumas. According to Kira, "Core traumas sensitize and bias responses to potential retraumatizing and or triggering events. Triggering trauma is the trauma that actually set off the postcumulative trauma response [...] Peripheral traumas are other traumas that are less salient in the person's over all life traumatic experiences" (Kira, Fawzi, & Fawzi, 2012, p. 182). This trauma classification is fluid and can change based

on additional experiences of the individual. For example, a peripheral trauma may become a core trauma if additional traumatic experiences occur that are similar to the peripheral event.

Negative outcomes after a traumatic event generally take the form of posttraumatic stress symptoms. When these symptoms begin to interfere with a victim's functioning and everyday life, the individual can be diagnosed with Posttraumatic Stress Disorder (PTSD). Individuals can experience varying levels of PTSD symptoms, with half of cases recovering within three months of the traumatic event. Symptoms include re-experiencing the traumatic event in various forms (intrusive memories, dreams, or feeling as if the event is recurring), avoiding stimuli associated with the event, decreased responsiveness to trauma and non-trauma related situations, increased arousal, and increases in emotions such as anger, guilt, and fear (American Psychiatric Association, 2013). The diagnostic criteria for PTSD generally assume that it is one specific event that triggers the symptoms posttrauma. Though one event may act as a trigger for symptomology, individuals can experience many traumatic events leading up to that trigger event that can have a significant impact on symptom severity.

Research on the cumulative effects of trauma indicates that increased exposure to traumatic events is related to higher incidence of PTSD symptomology. For example, Kira and colleagues (Kira, Templin et al., 2008) found a significant correlation between cumulative trauma and PTSD among a large sample of Iraqi refugees. Additionally, there were negative correlations between cumulative trauma exposure and sociocultural adjustment and a future-focused orientation. The impact of cumulative trauma was also seen in poor health outcomes within this sample. Moreover, prolonged trauma

experiences had a greater negative impact on physical and mental health than isolated trauma experiences. Similar results were found within a mixed sample in the United States that consisted of immigrants, refugees, and Americans (Kira, Fawzi, & Fawzi, 2012). Within this sample, cumulative trauma was predictive of increased depression, anxiety, and PTSD. Emerging research posits that cumulative trauma exposure in fact has more of an impact on current functioning than other popularly studied variables, such as aspects of personality and trauma severity. Ogle, Rubin, and Siegler (2014) studied the impact of previous traumas within an older sample of Americans. Within this study, they found that cumulative trauma accounted for a significant portion of the variance in PTSD symptomology related to the event that was causing each respondent the most amount of distress at the time of the study. Surprisingly, the influence of cumulative trauma exposure on PTSD was greater than that of personality factors (agreeableness, conscientiousness, extraversion, neuroticism, and openness) and social support.

The most common treatments for PTSD focus on a reduction of symptoms that interfere with functioning through cognitive reprocessing of the trauma and relaxation techniques to reduce arousal (Foa, Keane, Friedman, & Cohen, 2009). PTSD treatments have been found to be effective in the reduction of symptoms following many types of trauma, with the goal of increasing resiliency in the face of stressful life events. However the majority of these treatments fail to recognize and promote the individual's ability to grow from the traumatic experience, rather than to simply return to pretrauma functioning.

Posttraumatic Growth

Evolution of posttraumatic growth. The idea of personal growth following trauma is not a novel concept, but one that is based in a rich philosophical, spiritual, and cultural history. Among the Abrahamic religions (i.e., Judaism, Christianity, Islam), there are multiple tales of great suffering that conclude in rebirth, forgiveness, or enlightenment. This is also the case among Eastern religions which place a strong emphasis on personal discovery and creating meaning from experience (Tedeschi, Park, & Calhoun, 1998). Buddhism, for example, is acutely concerned with understanding and coming to terms with suffering. The basis of many Buddhist practices is in seeking enlightenment about one's existence and the cause of hardship (Wallace & Shapiro, 2006). In order to achieve well-being, one must understand that in life there is always impermanence, an absence of the self, and suffering (De Silva, 2006). These entities are often out of individual control, and therefore one must work to accept them to move forward in life and reach nirvana, or freedom from the cycle of suffering.

Within psychology, along with a general focus on psychopathology, theorists have developed concepts related to self-improvement and growth. In his work, Maslow (1968) indicated that the goal of all individuals is to seek self-actualization. This term has been described in many ways, but all indicate a level of self-fulfillment and living as one's true self in all aspects of life. According to Maslow's (1968) hierarchy of needs, one cannot begin to achieve self-actualization until a number of basic needs are met, for example, having basic physiological needs met and feeling a degree of safety in the world. Once these needs are met, individuals strive for connection to others. The love,

caring and support of others is required before an individual may begin the path toward self-actualization.

Around the same time as Maslow, psychologists and philosophers were beginning to examine the positive effects of traumatic events. This work was spearheaded by psychiatrist Viktor Frankl, whose own experiences of trauma during the Holocaust provided a unique first-hand account of how extraordinary circumstances can differently affect individuals. Frankl found that the individuals who could overcome traumatic situations were those who could find and maintain meaning in their experiences, proposing that the human will to meaning is what drives behaviour (Frankl, 1958). This will to meaning is so strong that individuals will give up their lives in order to maintain the things and people that are meaningful to them.

When trauma occurs, the will to meaning is repressed, leaving the individual empty and easily prone to illness and disorder (Frankl, 1992). Drawing on existential philosophy, Frankl posited that one enters an existential crisis in the absence of meaning in which individuals are faced with their fear of mortality and meaninglessness. Though this suffering is uncomfortable, it is a sign of achievement that the individual is not content with a life devoid of meaning (Frankl, 1992). Existential philosophers have indicated that through facing the universal fear of death and recovering from it, an individual may live a fuller and more meaningful life (Corbett & Milton, 2011). In his application of these ideas to psychology of trauma, Frankl developed logotherapy as a specific means through which to find meaning and alleviate existential frustration (1992). A main goal of this therapy is to encourage self-transcendent encounters and relationships, that is interactions with nature, important others and important causes

through which meaning can be found and one's sense of self strengthened. According to Frankl, "man is close to himself only to the extent that he is close to the things in the world, to the extent that he stands in and for the world" (1959, p. 161). Meaning comes from moving beyond the individual to the community, a higher power, and what one ought to do to better the world. One may never be free from suffering, but through the process of striving toward a personal meaning one has happiness through purpose in life.

Personal growth and the motivation to find meaning within experiences are also prominent within Ryan and Deci's (2000) self-determination theory. Individuals are viewed as intrinsically motivated to overcome challenges and incorporate new experiences into the self-concept in a process of making sense of these experiences. Within this theory, the 'will to meaning' develops "from people's desire to create the coherence and mastery that allows experiences to fit into place with one another and that provides a sense of purpose and direction" (Weinstein, Ryan, & Deci, 2012, p. 88). In order to act on this motivation, three primary psychological needs must be met: autonomy or sense of volition, competence, and relatedness to others. If these needs go unmet or are thwarted by personal or interpersonal factors, there will be a large negative impact on psychological well-being.

Definition of posttraumatic growth. The modern view of posttraumatic growth (PTG), as described by Tedeschi and Calhoun (2004), consists of this search for meaning as well as other domains in which individuals can experience positive changes. The process itself is not necessarily linear and can be quite challenging, however it is reported that approximately 30% of trauma survivors engage in this process and experience some degree of PTG following their experience (Tedeschi & Calhoun, 2003). The process of

growth itself can begin within days or weeks of the traumatic event and continue for years (Cohen, Hettler, & Pane, 1998).

Due to traumatic or stressful life events, previously held beliefs about the self are shattered. The individual may experience a period of high distress, confusion, and difficulty incorporating the event into the individual's set of schemas. This challenge to individuals' assumptions can be a catalyst for change, recovery, and forming new perceptions about the self and the world. Individuals begin to see themselves as survivors, rather than victims of circumstance. There is an increase in perceptions of personal strength so that individuals may become more self-reliant and have increased feelings of efficacy. Paradoxically, individuals may come to feel increased vulnerability as their perceptions of the world around them become more realistic. The world is no longer viewed as a safe place where bad things only happen to bad people. Rather, it is an unpredictable and fragile place. This change tends to promote an understanding of what resources are needed when faced with future traumatic events, and assertiveness in seeking out helpful coping strategies and supports. Moreover, through this reshaping of personal schemas, individuals move towards being more resistant to the disruptive effects of potential future traumatic events (Tedeschi & Calhoun, 2004).

Those who experience growth often see a development of their individual identity, developing a greater appreciation for life and more balanced priorities within their own lives (Tedeschi & Calhoun, 2004). This can take the form of appreciating the smaller things around them and taking advantage of each day as best as possible. Individuals seek out new opportunities and possibilities that take into account changes that have occurred due to the traumatic event. They may further seek out activities that

are more aligned with their personal values. Spiritual changes often accompany evolving views about life and the world. Individuals who had strong spiritual beliefs pretrauma tend to rely on these to some degree for coping with the event. Others develop a clearer and stronger sense of their spirituality through the process of growth. This may be shown through stronger ties to a religious group; however this is not necessarily the case.

Individuals may develop an awareness of how they view themselves in relation to a higher power or spiritual force. As with one's individual identity, one's spiritual identity may evolve to include less ambiguity and be tailored to individual spiritual needs.

Finally, developments are seen in how individuals relate to others (Tedeschi & Calhoun, 2004). Individuals report the strengthening of important relationships in their lives. Often these improved relationships include increased trust in the form of self-disclosure and expression of both positive and negative emotions. In addition, individuals can develop an increased sense of empathy and compassion for others who have gone through difficult situations. These experiences can lead both to increases in one's contentment with current relationships as well as seeking out opportunities to gain support from others and to give back to a community that was supportive during an individual's time of need. Depending on characteristics of the individual and of the traumatic event, growth may be experienced in one domain more than another, may be experienced evenly across various areas of life, or may be experienced in different domains within different timeframes (Calhoun & Tedeschi, 2001).

Models of posttraumatic growth. As the conceptualization of PTG advanced and was tested empirically, models of growth following trauma emerged that explained the process itself and factors that influence the process. These models are based in theory

surrounding recovery, stress, coping, and social support. Though a number of competing and complimentary models currently exist to explain how growth occurs following trauma, all contain a mixture of social and individual factors that influence the process of growth.

Model of life crises and personal growth. Schaefer and Moos (1998) proposed a model of personal growth following crisis that highlights the importance of environmental and personal system factors as they contribute to how individuals face event-related factors. These variables influence the cognitive appraisals and coping responses that individuals use in the direct aftermath of trauma, which then shape the positive outcomes of traumatic events. The specific forms that change takes following trauma may be directly related to the type of trauma experienced. For example, if individuals' lives are personally threatened, as survivors they may experience the greatest change in appreciation for life. Conversely, if they experience a significant relationship loss, individuals may move more toward connecting with important others in their lives. Schaefer and Moos (1998) see social support as having a very important role in the growth process through providing a broad context of environmental resources that the individual can draw on in times of crisis. Moreover, integration and interaction with social supports offers a place to reprocess traumatic events, while also learning positive coping skills. Individuals who have a stronger social network are more likely to use adaptive coping strategies, rather than avoidance coping, when faced with stressful life events. Broader community and social resources are also beneficial posttrauma in that group involvement with individuals who have gone through similar experiences can foster growth.

Comprehensive model of posttraumatic growth. Tedeschi and Calhoun (2004) expand on Schaefer and Moos' (1998) model by outlining how disruptions occur in more detail and highlighting the importance of cognitive processing within the growth process. Their model indicates that it is the initial disruption in schemas and beliefs that leads to feelings of distress directly following a traumatic event. Soon after the trauma, the individual ruminates about the event through automatic and intrusive thoughts. Eventually these automatic thoughts will become manageable, and the individual will transform ruminative thoughts into a more deliberate, reflective style of thinking about past experiences. This reflection leads to a reduction in distress and an increase in PTG and wisdom.

Tedeschi and Calhoun (2004) indicate that social support is crucial for cognitive processing to occur. In the aftermath of the trauma, individuals will enter a process of self-disclosure in which they share some of their experiences through talking to others, interacting with a higher power, or even writing about the event. As individuals begin to manage their ruminative thoughts, those around them assist by providing socially accepted schemas through which they can process the event. Moreover, interacting with others provides the individual with a breadth of information about coping strategies and how others have overcome similar situations.

Various caveats have been identified regarding the nature of the social support that assists in growth. As identified within Tedeschi and Calhoun's (2004) model, an important aspect of social support is self-disclosure. Therefore, if individuals are discouraged from sharing their experience with others, the benefits of social support are greatly reduced (Tedeschi & Calhoun, 2004). Additionally, the stability of social support

over time is of great importance, but can also be hindered by various situational and interpersonal factors. For example, social supports may be inconsistent due to the nature of the traumatic event. When a relationship loss occurs, the greatest distress is often felt when the individual lost was a close friend, family member, or confidant. When it is this significant other that is no longer available, individuals can experience a lapse in their supports at their greatest moment of need (Harvey, 2002). Traumas related to war or persecution also include a separation from loved ones and supports because they have been injured or killed, or because the individual must take refuge in a location far from their country of origin. For other individuals, their primary supports are simply inept in terms of approaching and assisting someone who is coping with a traumatic event. They may find it too frightening, disturbing, or confusing to speak with a trauma victim about their experience, thus reducing their opportunities for cognitive reprocessing of the event. Fortunately, individuals often have many sources of social support that can assist with the reprocessing of the trauma. When these supports are adequate and available, recovery and growth are possible (Tedeschi & Calhoun, 2004).

As this model of PTG has been tested among ethnically-diverse populations and across cultures, Calhoun and Tedeschi (2006) have incorporated both proximate and distal cultural influences on PTG into their model. Their adapted model views PTG within a sociocultural context. In this way, they take into account the stronger influence of one's primary reference group, both formally and informally. Of utmost importance are the social norms and traditions related to recovery that influence how an individual initially views a traumatic event and the coping strategies used when it occurs. When an individual has knowledge of and immersion within the group, they have a greater supply

of resources to manage a stressful situation in a culturally appropriate manner. Available examples within the reference group or larger culture that speak to experiences of growth, such as through personal narratives or culturally based mottos, also impact the individual's experience after traumatic events. When these are promoted and viewed in a positive light during times of stress and times of comfort, they are seen to have the greatest impact. Calhoun and Tedeschi's (2006) expanded model places the trauma victim within a larger network of important social influences.

Factors that influence growth. As indicated within the above models, some degree of distress is required to trigger the growth process, yet the outcomes of PTG appear to be in contrast to PTSD symptoms. Current research shows that relationships and interactions exist between these trauma outcomes. Many studies have discovered relations between moderate levels of PTSD and experiences of PTG. For example, positive correlations between PTSD symptoms and growth have been found among HIV-positive survivors of Hurricane Katrina (Cieslak et al., 2009), Israeli citizens under the threat of terrorism (Hall, Hobfoll, Canetti, Johnson, & Galea, 2009), individuals who survived the Holocaust (Lurie-Beck, Liopsis, & Gow, 2008), and undergraduate students who experienced a range of stressful life events (Gerber, Boals, & Schuettler, 2011). Moreover, in a longitudinal study analyzing the unique and shared predictors of posttrauma functioning among Israeli prisoners of war, elements of the traumatic experience, such as degree of exposure to traumatic events and responses during the time of trauma, significantly impacted both PTSD and PTG in the same direction. Unique predictors of PTG included a sense of self-controllability, while unique predictors of

PTSD were typically personality variables and pretrauma circumstances and vulnerabilities (Dekel, Mandl, & Solomon, 2011).

To date, few studies have tested the impact of trauma accumulation on positive post-trauma experiences. The studies that are available on this topic have shown mixed results. A recent study on cumulative trauma experiences indicates that cumulative trauma has a direct effect on PTG within a sample of Palestinian adults (Kira, Omidy, & Ashby, 2014). A previous study by Kira and colleagues (2013) reviewed the developmental-based trauma framework and its relation to PTG in more detail. Within a Palestinian sample, type I traumas (time limited, individual occurrence) were positively associated with PTG, whereas type II traumas (time limited, multiple occurrences) were not significantly correlated with PTG and type III traumas (prolonged exposure) were negatively related to growth (Kira et al., 2013). Only one study collected data on both cumulative trauma and growth related attitudes within a non-Palestinian sample. In this earlier study by Kira and colleagues (2006), members of the Iraqi community in Michigan participated in a study to determine the impact of torture experiences on posttrauma outcomes. This study found that participants who experienced torture had greater trauma exposure overall. Additionally, this group of participants had greater belief that traumatic events that do not kill them make them stronger. The direct impact of cumulative trauma on growth attitudes was not reported.

Based on these findings, it appears that there is some relation between exposure to cumulative trauma and PTG. The studies on this relation thus far have focused on very specific groups who may have experienced a unique set of trauma experiences, and often are still experiencing extensive discrimination and distress related to type III traumas.

Exploration of the impact of previous trauma exposure on growth is crucial among a more diverse sample and within a different context in order to better understand the impact that an extensive trauma history can have on health. Overall, recent positive psychology research has highlighted the connections between positive and negative outcomes, indicating that only looking at positive outcomes in positive psychology research is omitting a crucial aspect of experience (Wong, 2011). This appears particularly true within trauma research as individuals experience an important mix of positive and negative outcomes that are closely intertwined when they search for meaning after trauma.

Research on PTG has aimed to develop a framework of growth that differentiates it from PTSD and other trauma outcomes, and find ways to increase its occurrence among trauma survivors. In this process, many variables have been examined that predict growth after trauma. For example, there appears to be a curvilinear relationship between age and growth, in which growth peaks in middle age. Studies have shown that PTG is less common among young children and early adolescents, as well as older adults (Milam, Ritt-Olson, & Unger, 2004; Polatinsky & Esprey, 2000; Shakespeare-Finch & Lurie-Beck, 2014; Tang, 2007). According to Tedeschi and Calhoun (1995), the effect of a traumatic event is lessened if it occurs in childhood due to the malleability of a child's self-concept and worldview. The traumatic event can be more easily integrated into the child's life and they can quickly return to pretrauma functioning through childhood resilience. Moreover, at a young age individuals may not have the abilities and maturity to reflect on their experiences in order to grow (Milam et al., 2004). Similarly, older adults may find it more challenging to adapt their views of themselves and the world

because they have developed a rich belief system surrounding their schemas (Polatinsky & Esprey, 2000). Some studies have reported gender differences in PTG, with more females reporting growth (Senol-Durak & Ayvasik, 2010a; Vishnevsky, Cann, Calhoun, Tedeschi, & Demakis, 2010). However, this trend is not always found to be significant (Polatinsky & Esprey, 2000).

A wide range of personality and interpersonal factors have been studied in relation to PTG. Findings are consistent in that individuals high in extraversion, agreeableness, conscientiousness, and openness to experience report increased growth, whereas those high in neuroticism experience less growth (Linley & Joseph, 2004). Positive emotional factors, such as self-esteem (Dolbier, Jaggars, & Steinhardt, 2010), optimism (Prati & Pietrantonio, 2009), and a disposition of positive affectivity (Leloirain, Bonnaud-Antignac, & Florin, 2010), have been found to be positively correlated with PTG. These variables may affect functioning through their main effects on growth, or they may exert their influence through mediating or moderating other variables, such as the form of coping used in reaction to the trauma or the degree of control one feels following a traumatic event.

As described in the definition and models of PTG, many important aspects of personal growth involve how individuals interact with the world around them and other individuals within their world. Therefore, a significant body of research has dealt with the interpersonal aspects of growth. At a primary level, trauma itself can stem from interpersonal concerns, related to abuse, crime, and most commonly relationship losses. In fact, Joseph and colleagues (2005) found that the unexpected death of a loved one was the most distressing event for university-aged adults. Though death of loved ones and

relationship breakdown are a part of everyday life for most individuals, these losses still cause a disruption in assumptions about the world and can spur changes and growth following loss (Calhoun, Tedeschi, Cann, & Hanks, 2010). Significant levels of PTG have been noted among university students who experienced violent and nonviolent loss in the United States (Currier, Mallot Martinez, Sandy, & Neimeyer, 2013; Michael & Snyder, 2005) and Hong Kong (Yo, Chu, & Yiu, 2008), divorcees (Krumrei, Mahoney, & Pargament, 2011), and students who experienced a nonmarital breakup (Hawley & Mahoney, 2013). Moreover, bereaved individuals were found to have higher PTG than individuals who had experienced a sexual assault trauma or motor vehicle accident (Shakespeare-Finch & Armstrong, 2010). Once a trauma has occurred, interpersonal support and connections can have a large impact on the growth process itself. Yet, this relation between social support and PTG has not been consistent within the literature (Prati & Pietrantonio, 2009). The relation of PTG to theory and empirical findings on social support and connection to others is outlined below.

Social Support

Social support has been broadly defined as “the comfort, assistance, and/or information one receives through formal or informal contacts with individuals or groups” (Flannery, 1990, p. 594). Social support can be received through verbal or nonverbal methods and must be perceived to be helpful in order to gain from it. Initially researchers considered the different aspects of this variable to be representative of a single construct. However, emerging research shows that varying forms of social support exist that can have a differential effect on functioning. One way to view social support is along three dimensions: structural, functional, and perceptual. The structural dimension of social

support includes a person's connection to support and social groups, whereas the functional dimension of social support includes the type and quality of the supports. Finally, the perceptual dimension of social support focuses on one's subjective view of the support received (Chronister, Johnson, & Berven, 2006). Each of these elements is important to the understanding of social support and contributes to recovery following stress and loss.

Models of recovery through social support. Aspects of PTG theory are closely related to general models of recovery and well-being (Zoellner & Maercker, 2006). Two primary models of social support, the stress-buffering model and the main effect model, have been proposed to describe how different forms of social support increase well-being and aid in recovery, particularly in the aftermath of trauma. These models have similar components, yet the mechanisms through which social support influences psychological health varies. Stress-buffering models of social support (Cohen & Wills, 1985) propose that perceived social support acts as a moderator in the relation between a stressor and subsequent psychological health. When social support is perceived as high, the impact of a stressor is lessened. Positive effects of social support are insignificant when individuals are not undergoing stress. In contrast, the main effect model of social support (Cohen, Underwood, & Gottlieb, 2000) proposes that the positive effects of social support can be seen regardless of the individual's current level of stress in their lives.

The stress-buffering and main effect models of social support appear to explain different aspects of the relation between social support and stress (Cohen, Underwood, & Gottlieb, 2000). Within the stress-buffering model, perceived social support exerts its influence primarily in the recovery process through altering the initial appraisals that

individuals make about the situation. If individuals believe that others will help them through difficult times, they tend to appraise situations as less challenging and themselves as more in control. Throughout the recovery process, perceived and received support influences the cognitive and emotional responses one has, which influences psychological well-being. Moreover, sharing one's concerns about the situation with others can reduce the distress and negative appraisals of the traumatic event.

Within the main effect model of social support, perceived social support takes a secondary role to the importance of structural support, such as social integration which refers to the extent of individuals' connection to their social network (Cohen, Underwood, & Gottlieb, 2000). Social integration has been posited to influence psychological health through many mechanisms. Social networks, or the individuals within daily life from whom support can be gained, influence the individual's actions, such as health-related behaviours and adaptive coping mechanisms, and they provide a sense of comfort and predictability in an individual's life. These benefits are important both in times of low stress and after high-stress traumatic events. Perceived social support can also influence the main effects of social support in that knowing that social supports are available may influence positive psychological states. Moreover, a sense of belonging to one's social group, or the feelings that one holds an important place within their social network, has a main effect on well-being in daily life.

Recent research on stress-buffering and main effect models of social support has found consistent support for the main-effect model, particularly when predicting positive gains (Bal, Crombez, Van Oost, & Debourdeaudhuij, 2003). Support for the stress-buffering model has been less consistent and less frequently tested, though it is still

evident throughout the literature (McMahon, Felix, & Nagarajam, 2011). Some researchers speculate that both mechanisms are at work, but which is more influential is dependent on the severity of the stressful event experienced (Bal et al., 2003). For example, among a large sample of undergraduate students, researchers compared the impact of various aspects of social support on physical health (Hale, Hannum, & Espelage, 2005). By measuring tangible support, feelings of belonging, disclosure about stressful events, and social intimacy, the authors reported that belongingness directly predicted physical health. As in the main-effect model of social support, within this sample of relatively healthy individuals, social integration/belonging was the most important factor influencing health. According to Hale and colleagues (2005), other aspects of social support may gain relevance during times of significant distress or when physical health is not as strong. Therefore, different forms of social support may impact how individuals experience and react to traumatic events.

The main effect and stress-buffering mechanisms of social support have informed growth researchers in their development of theory to explain PTG. For example, aspects of Calhoun and Tedeschi's (2006) model focus a great deal on what others can do to directly assist the individual with reprocessing the particular traumatic event they have experienced and providing support through the growth process. This aspect of their model is reminiscent of the stress-buffering model of social support in that social supports are most effective when high distress has occurred due to trauma. Conversely, the distal social and cultural influences within Calhoun and Tedeschi's (2006) model are consistent with the main effects model of social support and stress. They indicate that community members and social norms teach individuals how to react to trauma directly

and generally how to behave and recover in times of stress. Therefore, models of PTG incorporate both a main effect and a stress-buffering effect of social support that significantly influences the growth process.

One element missed by these models of social support is the concept of relatedness included within self-determination theory (Ryan & Deci, 2000). Relatedness goes beyond simply gaining social support from others and has a large influence on one's motivation toward goals. In all areas of functioning, individuals are more likely to act on a given goal if they feel some intrinsic motivation toward the goal, or that the motivation is coming from within themselves. This internally motivated activity seems, on the surface, unrelated to interpersonal relationships; yet Ryan and Deci (2003) have found that individuals are more likely to feel intrinsically motivated when they have a strong sense of security and relatedness within their primary reference group. Therefore, by feeling connected to others, one is able to act on their own personal goals that may or may not be related to the group.

This importance of relatedness is captured within community psychology, which views social support as extending beyond only the personal support received. In fact, from this perspective, the most important relationships are those that are mutually supportive and thereby focus on the interpersonal aspects of support (McMillan & Chavis, 1986). The emphasis is placed on the importance of social integration and relating to others through the exploration of a positive sense of community. The community to which individuals belong can be defined by geographical terms, encompassing individuals who live or work in close proximity to one another, or it can be

viewed as any group of individuals who feel tied to one another through a common sense of community (Chavis & Newbrough, 1986).

According to McMillan and Chavis (1986), four elements are important in the formation of a strong sense of community: membership, influence, integration and fulfillment of need, and shared emotional connection. Group membership provides a sense of safety in the group through the setting of boundaries: individuals know who is in the group and who is not. These feelings of safety are particularly important following an interpersonal stressor or traumatic event that involved individuals not known to the victim. The sense of group membership and personal relatedness is shared across all group members. In addition, individuals are influenced strongly by the community itself through a pressure to conform. The negative aspects of conformity are reduced through the inclusion of bidirectional influence. Community members strive to ensure that the needs of all members are met and group cohesion is strongest when these needs are complimentary and can be achieved simultaneously. On an emotional level, shared experiences and increased contact with community members create an emotional connection that increases satisfaction with group membership and group cohesion (McMillan & Chavis, 1986).

Having a strong sense of community has a positive influence on individuals regardless of the other positive or negative events occurring in their lives, similar to the main-effect model of social support (Cohen, Underwood, & Gottlieb, 2000). When stressful events do occur, individuals are able to work together to overcome them. Moreover, the community provides a safe environment that fosters growth, but it is also a location from which specific meaning and growth can be derived (McMillan & Chavis,

1986). If individuals experience their community as unsupportive in these pursuits, they may choose to leave the social group and seek out a new community. Moreover, traumatic situations may forcibly remove individuals from their community and social groups. The process of becoming a member of a new community can be challenging and time consuming, but researchers indicate that new positive relationships can be established that are as strong as those within the original community (Baumeister & Leary, 1995). In this way, an individual's involvement in a community and network of relationships is not permanently disrupted based on trauma or less than ideal interactions.

Social support and trauma outcomes. Social support in general has a positive impact on all areas of well-being and health. Researchers have found high perceived social support to be related to improvements in physical health (Hale et al., 2005), adjustment to illness states (Stone, Mezzacappa, Donatone, & Gonder, 1999), and improvements in coping with everyday stressors (Cohen, Underwood, & Gottlieb, 2000). Moreover, these relations with social support are relatively consistent across cultures, though the type of social support used may take slightly different forms (Kim, Sherman, & Taylor, 2008).

Social support is particularly important in the aftermath of trauma. According to Tedeschi and Calhoun (2004; Calhoun & Tedeschi, 2006) and Schaefer and Moos (1998), social support is a key component of the posttraumatic growth process. Through the relationships that individuals have with others, they are better able to process their traumatic events and cope with them in ways that promote growth. Moreover, the act of moving outside oneself into relationships with others can encourage finding meaning in even the most unimaginable circumstances (Frankl, 1992). The strength of social support

after trauma has been studied extensively within trauma literature. Results show that social support impacts recovery from a wide range of traumatic events (Prati & Pietrantonio, 2009). Regarding the experience of illness and loss, social support is an important part of the healing process for both those diagnosed with illness and their loved ones. Within a moderately sized sample of bereaved HIV/AIDS caregivers in Canada, social support positively contributed to PTG following loss (Cadell, Regehr, & Hemsworth, 2003). In another study examining the spouses of myocardial infarction patients, social support had a direct effect on PTG (Senol-Durak & Ayvasik, 2010b). Weiss (2004a; 2004b) studied both women diagnosed with breast cancer and their husbands within a series of studies, and reported that PTG for the diagnosed women was predicted by perceived social support from their husbands. Interactions with other breast cancer survivors who found meaning in their experiences were also indicative of PTG for the women (Weiss, 2004b). Among husbands, stronger social support, greater marital support, and greater commitment were significant predictors of growth (Weiss, 2004a). It appears that having a strong, supportive bond within the couple helped both groups overcome the trauma of breast cancer diagnosis. The importance of helping the couple work together to assist each other in healing and recovery corroborates previous findings of how significant other social support can lead to positive outcomes. Moreover, these findings indicate that social support is beneficial when individuals are faced with both physical and emotional struggles.

The value of social support in the growth process extends beyond the experience of physical illness. The relation has been detected in combat veterans, such as those from Operation Enduring Freedom and Operation Iraqi Freedom. Benetato (2011) studied

some of these veterans following a major combat-related amputation, and reported that post-deployment social support was a significant correlate of PTG. Similar connections between social support and growth have been uncovered following natural disaster (Cieslak et al., 2009), exposure to terrorist attacks (Hall et al., 2010), and other forms of trauma. For example, in a sample of adults who had been victims of sexual assault, perceived benefits after the traumatic event were associated with greater social support (Borja, Callahan, & Long, 2006).

Social support and interacting in meaningful ways with important others are especially important following loss or bereavement because often, “our greatest losses [...] are social losses – of interaction, companionship, love, compassion, and the human touch” (Harvey, 2002, p. 4). Through support, individuals can create narratives of their loss events and regain some of the social elements that were lost through their traumatic event. A meta-analysis performed by Michael and Cooper (2013) supported these findings by identifying a significant theme that social support mediates the relation between bereavement and finding meaning or experiencing growth from the loss. This theme was evident across the lifespan and different bereavement situations. Though not as broadly researched, relations between personal growth and social support have also been found with those who experienced a divorce or relationship breakdown. Initial research in this area found significant correlations between PTG and the personality factor of agreeableness among a sample of undergraduate students who experienced relationship dissolution (Tashiro & Frazier, 2003). The authors believed that this result could be explained by the fact that those high in agreeableness tend to seek out social interactions and close relationships outside of their romantic relationship, and therefore

had sufficient support following the dissolution to find meaning in the event. These hypotheses were supported in subsequent research. For example, among a sample of divorcees at the time of their divorce and one year following divorce, PTG was found to be positively correlated with religious and secular coping practices which included seeking out social supports from both religious and nonreligious communities (Krumrei, Mahoney, & Pargament, 2011). A further study of individuals who had experienced a relationship breakdown at least one year prior showed positive correlations between growth and seeking and receiving social support from important others (Miller, 2010). Therefore, social supports are crucial to recovery and growth following relationship losses.

Whereas PTG and PTSD both emerge from the same disruption of important assumptions during a trauma, social support may be one of the factors that compel one to seek out growth opportunities rather than continue to experience PTSD symptoms. In their study on predictors of PTG and PTSD, Schuettler and Boals (2011) revealed that among American undergraduate students, social support from friends, family, and significant others positively predicted PTG and negatively predicted PTSD. Findings from a sample of HIV-positive Hurricane Katrina survivors were also in accordance with this theory, in that received social support after the hurricane was positively related to the interpersonal aspects of PTG and seeing new possibilities in one's life. No significant relations were found between social support and PTSD symptoms (Cieslak et al., 2009). A significant negative relation was reported between social support and PTSD symptoms among a sample of women who had just given birth (Sawyer et al., 2012). Therefore,

social support following trauma acts to both reduce PTSD symptoms and increase the occurrence of growth and meaning making.

The benefits of social support posttrauma are evident across cultures, worldviews, and geographic location. Aldwin (2007) has posited that culture has a significant influence on social supports following a stressful life event. Culture can influence norms surrounding social supports as well as stressors, wherein the ways that individuals react to stressful life events are culturally-based. Moreover, the reactions of others based on these norms influence the use of social supports as well as the type of supports that are offered by others within the culture. Some cultures place greater emphasis than others on seeking out social support following trauma. For example, Dirik and Karanci (2008) uncovered a strong association between perceived social support and PTG among Turkish rheumatoid arthritis patients. The authors acknowledge that findings related to social support have sometimes been mixed, but support has remained strong within Turkish samples. They cite cultural factors related to the importance of collective values and interdependence for these consistent results. Within other cultures, disclosing personal information through social interactions is discouraged, yet social support is still important after stressful events. Kim, Sherman, and Taylor's (2008) research shows that the most effective type of social support for Asian Americans, for example, is more implicit and based in general social interaction rather than using supports to reprocess the stressful situations. These findings support the notion that social support is beneficial across cultures; however, the exact form of social support and how it is used may be culturally influenced (Aldwin, 2007).

In spite of broad cultural influences, differences based on ethnicity and/or religion are not consistently found within the literature. Within a national sample of individuals who had been exposed to terrorism during the Israeli-Hezbollah War, various factors were observed to be significant predictors of PTG. For example, women reported greater growth following trauma and it was hypothesized that this was related to women's greater tendency to seek out and offer social support (Hall et al., 2010). Moreover, greater social support in the form of more closeness with others predicted PTG. No differences were reported in this relation based on whether the respondents were Arabs or Jews. A further study comparing Israeli and American veterans found no differences in reported PTSD and PTG, in spite of significant cultural and value differences between the two groups (Kafko, 2009). As well, the type of veteran did not mediate the relation between social support and PTG. Therefore, it is likely an interaction between personal and cultural variables, as well as how these variables influence seeking out social support in times of stress, that has the greatest impact on growth.

Social support as a multifaceted concept. In spite of the finding that social support positively influences posttrauma functioning, Prati and Pietrantonio (2009) have identified inconsistencies in the relation between social support and PTG. As described, social support can encompass many different forms of support seeking or involvement in relationships and many studies do not differentiate between the different forms or sources of social support. In their meta-analysis, the authors found that the existence of social support following trauma and seeking out social support as a means of coping with traumatic events were only moderately related to growth (Prati & Pietrantonio, 2009). They speculated that certain forms of social support may have a greater and more

beneficial effect at certain stages of the recovery process, but not others. This would support the combination of the main-effect (Cohen, Underwood, & Gottlieb, 2000) and stress-buffering (Cohen & Wills, 1985) models of social support. However, the authors did not separate the studies in their meta-analysis based on what form of social support was measured, nor by the source of social support. An analysis that differentiates between different forms of social support and who is providing the support would be beneficial to understanding the true relation between social support and PTG. This sentiment is mirrored within growth research, trauma research, and general research on social support.

As a result of these imprecise studies of social support, growth researchers strove to further differentiate between different forms of social support in order to fully understand the impact of positive relationships on growth. One distinction made in the literature is between subjective and objective views of social support. Research shows that one's perceptions of their social ties are more important in the recovery process than objective measures, such as actual size of one's social network (Haber, Cohen, Lucas, & Baltes, 2007). These results have been replicated by PTG researchers. For example, in a study of breast cancer patients, more PTG was related to higher levels of perceived social support from friends, family, and a significant other in the individual's life (Bozo, Gündoğdu, & Büyükaşık-Çolak, 2009). This study aimed to confirm previous findings in which dispositional optimism was related to higher PTG, yet the authors reported that the relation was moderated by received social support from a private other. Therefore, high dispositional optimism was only related to higher PTG when perceived social support from an important other was high. This relation did not exist when perceived social

support was low. The authors highlight the fact that this sample consisted only of females, who are known to utilize social support consistently more than males in similar situations (Bozo et al., 2009). Further research is required to identify whether these findings can be generalized to other populations based on gender and trauma type.

Within a sample of individuals suffering from myocardial infarction in Turkey, perceived social support had a significant positive effect on PTG (Senol-Durak & Ayvasik, 2010a). The authors further tested the relations of social support to coping behaviour and found coping to mediate the relation between social support and growth. This study provides support for Schaefer and Moos' (1998) theory that coping behaviour is highly tied to social support. Other researchers have reported results that better support Calhoun and Tedeschi's (2006) model regarding social support and growth. For example, Sheikh (2004) measured the influence of satisfaction with social supports and coping skills on PTG among participants suffering from heart disease. In contrast to previous research, in this study social support satisfaction did not significantly predict growth. It may be that using social supports in order to reprocess the traumatic event elicits growth, rather than perceiving one's relationships as generally satisfying. Therefore, it is important for studies on social support and stress to inquire about the supports received in relation to a specific event due to the fact that individuals can benefit from the emotional support from others without being satisfied with their overall availability of social support.

Wilson and Boden (2008) corroborated null findings regarding satisfaction with perceived social support among a sample of university students. Their results indicate that the popular opinion that subjective measures were better predictors of growth may

not be accurate, yet they also found that the size of one's social network was not strongly predictive of growth. In contrast, within a sample of bereaved individuals after the loss of a family member, Engelkemeyer (2009) revealed that all measured forms of social support were positively related to PTG, including perceived emotional support, perceived problem-solving support, social support satisfaction, and size of social network. These results are evidence of the strong impact of social support on functioning, as well as the inconsistent results when so many forms of social support exist and may influence posttrauma functioning in different ways.

Community relatedness and trauma. Arguments abound regarding the importance of perceived and received social support; yet these aspects of social support only address a portion of the benefits that one can gain from social support. Scales of perceived social support include items related to how others directly helped the individual in times of need and the immediate benefits that the individual perceives from this support (Chronister et al., 2006). Research is beginning to emerge indicating that the approach of community psychology to the idea of social support and social interactions is highly conducive to experiencing growth following trauma and loss. By viewing concepts of relatedness, belonging, and sense of community on a larger group level this approach to social support incorporates both distal and proximate influences of social support as outlined by Calhoun and Tedeschi (2006).

Empirical evidence for the relation between community relatedness and growth has begun to emerge within certain populations and trauma types. For example, within a sample of individuals who had experienced childhood psychological or physical abuse from a family member, it was indicated that having a strong sense of community as an

adult is a protective factor against distress, regardless of the form of abuse (Greenfield & Marks, 2010). Communities can also come together in different ways following tragedy in order to encourage positive well-being. This was seen when community aid was given following severe flooding (Kaniasty, 2012) and when individuals were able to come together as a community to share concerns and engage in demonstrations following the 2004 train bombings in Spain (Páez, Basabe, Ubillos, & González-Castro, 2007). Community support allows individuals to feel a part of something larger than themselves when feelings of confusion and loss are prevalent. Many studies that focused on the importance of a sense of community and feelings of belonging have examined traumatic events experienced by an entire community. Less is known about how community involvement may impact recovery and growth following an individually experienced traumatic event, as they are often experienced within North America.

One specific type of community has received a great deal of focus within the literature: religious communities. Religion and spirituality have been found to be highly related to the experience of PTG (Prati & Pietrantonio, 2009), but religion itself contains multiple mechanisms through which it can exert its positive influence. One such mechanism is through a connection to God or a higher power. Yet, research has shown that the social connections and sense of belonging that can be gained through religious participation also has a strong positive influence on recovery and growth. According to George, Ellison, and Larson (2002), religious participation and coping appear to be the most salient dimensions of religion associated with health and recovery from stress. They indicate that attending religious events is one way that individuals may gain social support from their religious group, which encourages personal growth.

Specifically in relation to trauma outcomes, Palgi and colleagues (2011) cite social support from a religious community as a major protective factor for mental illness in their study of secular and ultraorthodox Jewish Holocaust survivors. They found that having a stronger sense of community and belonging within a religious group helped to reconstruct disrupted worldviews following trauma. Similar benefits from religious social support have been found in relation to prostate cancer (Bowie, Sydnor, Granot, & Pargament, 2004), war trauma (Kroo & Nagy, 2011), and reactions to the September 11th terrorist attacks among high school (Milam, Ritt-Olson, Tan, Unger, & Nezami, 2005) and college students (Ai, Tice, Lemieuz, & Huang, 2011).

Some researchers have found seeking community support through a religious group following trauma to be a higher order dimension of religious involvement that is related to higher levels of PTG (Harris, et al., 2008). In a review of 100 studies that addressed both PTG and religion, Prati and Pietrantonio (2009) found a trend that the use of religion and religious community in order to cope with a traumatic event was strongly related to growth across the studies. Conversely, spirituality and one's connection to a higher power was only moderately related to positive changes after trauma. They indicate that religion has an effect on growth through promoting community and group involvement and through highlighting the importance of meaning-making following crisis. Moreover, this community support, such as through a religious group, is particularly important when significant supports are lost through the traumatic event, such as with war trauma or bereavement (Kroo & Nagy, 2011). In some instances, larger communities and groups are more aware of how to help following different forms of traumas, whereas individual supports may not possess the skills to provide support in

those situations. This was evident within a large sample of undergraduate students in which religious coping was more related to PTG than general coping strategies (Gerber, et al., 2011).

A recent series of studies by Dekel, Nuttman-Shwartz, and colleagues aimed to expand the literature on PTSD and PTG by directly examining sense of group belonging within a number of different participant groups in the Middle East (2009; 2011). They found that among Israeli college students, sense of belonging to the college and other community groups was associated with fewer PTSD symptoms (Nuttman-Shwartz & Dekel, 2009). In another study, a greater sense of national belonging (i.e., national involvement, identification, and loyalty to Israel) and living within tight knit kibbutz communities both protected against the experience of PTSD symptoms following rocket attacks in Israel, but only greater sense of belonging was associated with increased PTG (Dekel & Nuttman-Shwartz, 2009). Similarly, in a study of individuals who experienced forced evacuation in Israel, Nuttman-Shwartz, Dekel, and Tuval-Mashiach (2011) found that when individuals experienced a high sense of belonging to their country, their PTSD symptoms were lower, and they had heightened experiences of PTG. Moreover lower levels of symptoms were found among religious respondents. Together, these results indicate that a sense of belonging can protect against PTSD symptoms following stress. Additionally, when symptoms do occur, belonging to a community improves the process of moving from distress to growth following trauma.

The work that Nuttman-Shwartz and Dekel (2009; 2011) have done highlights the importance of feeling that one belongs to a community or group that is larger than oneself. As shown in their studies and others, these communities may include bonds

based on social interests, religion, ethnicity, culture, and a variety of other elements. While the researchers have documented promising results in this area, studies have been limited to individuals within distinct geographical locations and circumstances. For example, Nuttman-Shwartz and Dekel (2009; 2011) have studied a unique population in that there are many shared religious beliefs across Israelis and dedication to the country is strong. Mandatory army service and the links of the country to one's religious identity are some of the ways that sense of belonging and commitment are uniquely encouraged within these samples (Hall et al., 2009).

Throughout the literature, there is a thread of sense of community and belonging as a crucial mechanism through which individuals receive benefits, both after trauma and in everyday life. Many studies include elements of group commitment, yet few look directly at how this may impact the individual in relation to trauma and loss, and even fewer specifically consider community identity and support in relation to posttraumatic growth. However, the idea of community involvement has gained more attention through research on the specific types of groups that one can identify with, such as religious or ethnic groups. Psychologists have investigated the use of these forms of communities to establish individual and group identities that promote recovery, growth and support.

Individual and Group Identity

From a community psychology perspective, belonging to a group fosters support through many mechanisms. Yet, on an individual level, theories show that simply being surrounded by group members does not automatically create a strong attachment to the group or group identity. Tajfel's (1974) seminal work on Social Identity Theory indicates that group membership motivates behaviour through the understanding of social norms,

values, and beliefs that are practiced by all group members. In order for these values to be internalized, individuals must form a strong sense of belonging to the group and a social identity, defined as “that part of an individual’s self-concept which derives from his knowledge of his membership of a social group (or groups) together with emotional significance attached to that membership” (p. 69). When group involvement and commitment does exist, it promotes use of specific group level supports, values, and beliefs that individuals can rely on in times of confusion (Aldwin, 2007). Therefore, an interaction between group and individual identity is required to fully understand the mechanisms of a community in recovery.

Self-determination theory and identity formation. As previously indicated, Ryan and Deci’s (2000) self-determination theory is based in the idea that individuals develop various goals for their lives that are both intrinsically and extrinsically motivated. In order for any action to take place toward these goals, basic needs for autonomy, competence, and relatedness must be met. Relatedness and social interaction in particular play an important part in shaping an individual’s goals and identity. Individuals are exposed to a large variety of goals and values from different people, at different times in their lives, and even in different social contexts throughout their day. This is particularly salient and challenging within our multicultural world. Not all values can be incorporated into one’s self-concept and not all goals can be worked toward. Within this context, individuals form a social and personal identity in order to understand and organize the information they are exposed to, which allows them to focus on goals that are most meaningful and helpful to them (Ryan & Deci, 2000). Individuals go through a process of identity development in which they may identify various values, but

they have not internalized them. Over time, internalization and integration of various values may increase, a sign of enhanced belief in these values as they apply to the individual and not just the social group. According to Ryan and Deci (2003), internalization is more likely to occur if individuals experience the identity as assisting them in some way, for example allowing them to cope better with hardship.

At the core, the role of an identity within self-determination theory is to satisfy the personal need of connecting to others through interaction with a social group, which is consistent with the concept of relatedness. By joining social groups, individuals feel more control over their situations and other people in their world. This feeling of control and structure is especially important in the aftermath of trauma and loss when many individuals cannot help but see their safety as out of their control and the world as an unpredictable place. In this way, forming a social identity through interactions with social groups can help to re-establish the norms and assumptions about the world based on that group's values and norms related to trauma exposure and recovery. Those who feel like they are a significant part of their social group, and have incorporated values from this group into their own personal identity, have even more resources to grow from traumatic events and are surrounded by trusted individuals who can further help them through this process.

Though individuals are intrinsically motivated toward growth, which specific goals are sought out and how these goals are obtained are largely determined by culture. As individuals are exposed to different goals from different cultural experiences, they can go through a process of internalization and integration of individual norms and extrinsically motivated goals that they find useful in order to incorporate them into their

established self-concept and identity (Ryan & Deci, 2000). Goals that are not intrinsically motivated often come from parents, teachers, religious leaders, and others who hold some authority in an individual's life. The more an individual feels a connection and sense of commitment to important others, the greater the internalization and integration of these goals and values into behaviour. Over time, the initially extrinsic goals may become intrinsic through this process of internalization. Within this context, important others act as models of pro-growth behaviour and offer suggestions about the ideal method of recovery from challenges and loss.

Ethnic identity theory. Growing from this research on identity development and motivation toward growth, one question in the aftermath of traumatic events is how individuals relate to their social group and how this influences the strength of their social and individual identity. Ethnic identity is an important piece of this social identity as many of the norms, values, and beliefs about trauma and loss are determined by cultural elements. The inclusion of ethnic identity in psychological research has been steadily increasing. Initially, ethnic identity was measured only by labels or categorizations that individuals make among groups, such as ethnicity. Since that time, research has shown that viewing identity as a process of ethnic identity development gives a more accurate and nuanced understanding of the individual as compared to looking only at ethnicity (Phinney & Ong, 2007).

Some researchers have proposed that the process of identity development differs by ethnic group. For example, Sue and Sue (2008) have summarized various developmental models of racial identity for visible minorities within their Racial/Cultural Identity Development model. This model states that members of visible minorities go

through stages of racial identity development. At the beginning stage, individuals tend to have a fairly self-depreciating view of themselves and their racial group based on stereotypes they have internalized from the dominant culture. Through the process of identity development, they move from conforming completely to the dominant culture to an integrative awareness of how their minority culture and dominant culture can coexist. In contrast, Sue and Sue (2008) outline a descriptive model of White Racial Identity Development in which individuals initially have a naïve curiosity about race, but generally hold positive ethnocentric views of their own group. Individuals can work through phases of conformity, dissonance, resistance/immersion, introspection, and integrative awareness before committing to an antiracist action phase of identity development. The stages of this White Racial Identity Development model are similar to those for visible minorities, but the meaning and self-identity attached to each stage is different.

Phinney's (1989) conceptualization of identity development views ethnic identity as a process that occurs across the lifespan. Instead of looking at how members of specific groups develop, she has attempted to conceptualize identity as group nonspecific, focusing instead on the similarities in how individuals can connect with and explore their ethnic identity. Phinney's (1989) ethnic identity theory has roots in theories of ego identity formation and development. Marcia (1966) developed four ego identity statuses relating to the exploration of identity options and a subsequent decision about one's identity that are based on Erikson's theory of ego identity formation. Within Marcia's (1966) framework, those who have not explored their identity or made a commitment to a given identity are described as *diffuse*. When a commitment is made to an identity

without extensive exploration, but rather based on parental values or societal norms, the individual is seen as being in a *foreclosed* state. An individual can enter *moratorium* when they begin to explore their own identity, but have not yet made a commitment to their identity. Finally, an *achieved identity* occurs when the individual has completed their exploration and has decided to commit strongly to a given identity. Individuals pass through stages at different rates and may return to earlier stages many times prior to achieving an identity.

Using this model as a basis, Phinney (1989) proposed a three stage model of ethnic identity development. When individuals are young, they are at a stage of *unexamined* ethnic identity. They do not think a great deal about their identity and internalize aspects of their unique ethnic group or the dominant group without question. In the *exploration* stage of ethnic identity development, individuals begin to find out more about their ethnic group as well as other groups in order to gain information that will help them in their process of creating their own ethnic identity. This stage of exploration may occur as a result of some event that awakens a person to their identity or in accordance with other developmental stages. Finally, individuals can enter a stage of *achieved and committed ethnic identity* in which they strongly identify with an ethnic group. While this model is proposed as stages, individuals can cycle through each stage at different times in their lives and may return to earlier stages based on life circumstances. Additionally, the unique details of each stage may differ by individual and/or ethnicity, but the process remains the same across ethnic groups.

Being in a state of achieved ethnic identity can include a number of different components (Phinney, 1989). Individuals may have strong ethnic involvement through

social participation and cultural practices. Inquiring about specific practices and participation is often used as a measure of ethnic identity, though it is not always indicative of strong identification as some groups have more cultural practices than others and these practices may hold different importance and meaning depending on the ethnic group. Having a sense of belonging to the ethnic group is another indicator of ethnic identity, but can once again be related to the importance that individuals attribute to their ethnicity and culture. Finally, positive and negative attitudes toward one's ethnic group can be indicative of ethnic identity, such as pride, pleasure, and satisfaction with one's group. Moreover, acceptance of one's ethnicity is often used as a measure of identity achievement (Phinney, 1990).

Although measurement of ethnic identity is still evolving and improving, it is widely agreed that having a strong sense of ethnic identity can have positive outcomes. As indicated within self-determination theory (Ryan & Deci, 2003), a stronger connection to this form of group can help individuals internalize culturally appropriate worldviews and coping strategies that are particularly helpful within times of stress or crisis. Moreover, going through a process of identity development and strengthening may be an important aspect of recovery and growth. Models of posttraumatic growth appear to reflect the value of community and ethnic group involvement. The theories presented here build on one another to explain how personal growth is established and encouraged through both individual and interpersonal mechanisms. Therefore, in the absence of social support, feeling of community belonging, and a sense of identity within a social context, individuals would struggle to experience positive outcomes after traumatic events.

PTG in Cross-Cultural and Culturally Diverse Contexts

Though PTG has found roots in the philosophies of both Eastern and Western cultures, the exact psychological definition of PTG was developed in a Western context and therefore may be biased to reflect Western beliefs and values. In recent research, there has been an emphasis on testing the cross-cultural validity of psychological constructs and theories that were developed in specific cultures and regions. Reviews of PTG across the globe have found that there are many universal aspects of PTG. However other aspects are more culturally specific. Across a variety of cultures and experiences, individuals appear to grow from negative situations, but based on the values of the culture that growth may take on different qualities. For example, within individualistic societies, PTG is generally conveyed as personal growth through the individual reprocessing the traumatic event. In contrast, within collectivist societies PTG may occur more in the context of an individual growing and finding meaning within their relationships and to benefit their community (Splevins, Cohen, Bowley, & Joseph, 2010). Additionally, an initial disruption in assumptions was required for growth to occur among all groups studied (Weiss & Berger, 2010), but the exact assumptions that are disrupted appear to be somewhat culturally-based. Splevins and colleagues (2010) indicate that viewing the world as a just and safe place may be a primarily Western outlook, and therefore may have little effect on growth in other cultures.

PTG appears to be universally multidimensional, though the exact definition of these dimensions may vary across cultures. Whereas individuals in the United States and Canada experience growth as described by Tedeschi and Calhoun (2004), those in Japan, for example, experience less distinct growth in the spiritual realm. Rather, changes in

spirituality and appreciation for life were more intertwined to reflect cultural values. In spite of cultural differences, individuals within all areas of the world can experience a constellation of general changes in themselves, their relationships with others, and their appreciation for life, which are indicative of growth following trauma (Salo, Qouta, & Punamäki, 2005; Taku et al., 2007; Weiss & Berger, 2006).

Factors that encourage PTG are also similar across cultures, though these variables may vary in how they are expressed. For example, across different cultural and ethnic groups, having access to social support in times of crisis consistently promoted healing and growth (Weiss & Berger, 2010). In some countries, such as Turkey, social support manifests as having appropriate role models that one can learn recovery skills from (Weiss & Berger, 2010); whereas in others, such as Spain and Israel, traditional social support involves more of a connection to the larger community (Hirsch & Lazar, 2012). Yet, in each culture these forms of support are related to growth. The different types of support received may be related to parallel differences seen in the expression of distress following loss. Some studies have indicated that cultural context will interact with religious beliefs to impact how individuals react to trauma. For example, Wikan (1988) studied Muslim individuals living in two countries who had experienced the same traumatic event: the loss of a child. In Egypt, the loss was mourned outwardly and included strong emotional reactions. In contrast, those in Bali reacted with a calm composure very unlike their Egyptian counterparts. Thus, when controlling for religion and trauma type, strong differences in reactions emerge based on culture and ethnicity. These differences further impact how protective factors, such as social support, are used across ethnic groups.

Certain cultural variables and themes can have a large impact on growth. For example, a cultural willingness to express emotions and talk about traumatic events can severely affect growth and related variables, such as satisfaction with social support and cognitive reprocessing. The coping strategies traditionally used to cope with stress can also impact on PTG and how individuals view trauma. In particular, an interesting distinction in coping is made between collectivist and individualist societies. Individuals within collectivist societies often value interdependence and incorporate the other into their self-concept; thus, they may be more likely to use coping strategies that focus on the group, rather than pushing to strengthen the individual (Splevins, Cohen, Bowley, & Joseph, 2010). At the same time, when the well-being of others or the community is of greater importance than personal well-being, individuals who have experienced distress may not want to burden others with their emotions and concerns (Wei, Su, Carrera, Lin, & Yi, 2013). Therefore, differences in the exact composition of the growth experience may be seen across cultures and ethnic groups, but the ability to grow following loss and trauma appears to be universal.

Ethnicity and posttraumatic growth. Studies related to ethnic identity and posttraumatic growth have primarily focused on ethnicity and how cultural factors may influence growth. Across studies, self-identified members of ethnic minorities exhibit more growth and propensity for benefit finding following traumatic events compared to majority group members (Helgeson, Reynolds, & Tomich, 2006). In one study Kiang and Fuligni (2010) compared specific ethnic groups within a sample of ethnically diverse adolescents. The authors examined the associations between meaning in life, ethnicity, and well-being. They revealed that some ethnic groups may have a higher tendency to

search for and find meaning in their lives than others. Specifically, the authors found that those with Asian American backgrounds reported more search for meaning in their lives than those from Latin and European American backgrounds. The authors indicate that a greater search for meaning may be associated with the higher incidence of stressful life events that is often seen in minority populations. Moreover, finding meaning may come from the struggle that minority individuals have in finding their own identity within a social context. In spite of these findings, ethnic minorities do not always experience greater growth. For example, one study reported that PTG was negatively associated with being non-white among outpatients suffering from cardiac disease in Canada (Leung et al., 2010).

It is likely that the nature of the traumatic event itself can influence the relation between ethnicity and PTG. This is evidenced in a study on the impact of ethnicity on trauma outcomes after the September 11th terrorist attacks. In a large sample of ethnically diverse adolescents, levels of PTG were tested shortly after the attacks. Individuals who identified themselves as Persian had significantly lower levels of PTG compared to other ethnic groups (Milam et al., 2005). The authors speculate that this relation is due to the fact that the majority of Persian respondents identified as Iranian, a country which was identified as a member of the 'Axis of Evil' in the wake of the terrorist attacks. Therefore, a traumatic event being related to one's own ethnicity appears to impede the growth process. Moreover, as expressed in Calhoun and Tedeschi's (2006) updated model of growth, specific cultural beliefs, norms, and behaviours can influence the rate of growth following trauma. One important element of the growth process is having the opportunity for emotional expression. Within some cultures, emotional expression and

openness about internal experiences is discouraged. For example, within some Asian cultures, individuals are taught not to talk about their concerns. Therefore, if individuals closely identify with this identity, they may feel both external and internal pressure not to disclose information about their traumatic event. In this way, cultural factors can moderate posttraumatic growth (Manne et al., 2004).

Differences in how ethnic groups explain situations, or the attributional style of a given group, can also influence trauma recovery. Joseph and Gray (2010) compared African American and White college students based on their attributional style and PTSD symptoms after a traumatic event. General attributional style, along the internal-external axis, was significantly related to PTSD symptoms among White respondents only. However, when asked about attributions for their own traumatic events, both groups' PTSD scores were significantly related to having an internal attribution for the event. The magnitude of this association was significantly higher for the African American participants than White participants. The authors suggest that being part of an ethnic minority may encourage an external locus of control in general life events because individuals are so often faced with discrimination that is unavoidable and not based on personal characteristics, such as whether the individual is a good person. When an event occurs that is associated with who the individual is as a person, rather than their ethnicity or culture, it can have a larger impact on symptoms. Therefore, an extended history of racism and discrimination can influence how individuals react to other traumatic events.

Ethnic identity development as a protective process across ethnic groups. As demonstrated by the research, judging ethnicity only through an ethnic label can have confounding effects on all research, particularly research on posttraumatic growth.

According to researchers, the idea of ethnic identity as a developmental process rather than as a state is a more advanced conceptualization (Sue & Sue, 2008). By examining ethnic identity as a process, one can perform research that looks across groups and does not focus on group-specific variables. Moreover, researchers who have viewed ethnic identity as a process have found more consistently positive results for group involvement (Phinney, 1990).

Through an achieved ethnic identity and commitment to a particular ethnic group, individuals experience an increase in well-being and other positive factors. For example, Phinney and Ong (2007) indicate that meaningful involvement with an ethnic group leads to positive personal attitudes toward themselves. Having a sense of community within a social or ethnic group can also help to protect against negative emotional states. Within one study, a model was tested in which commitment to a social group was hypothesized to mediate the relation between identity exploration and psychological well-being among minority group members (Ghavami, Fingerhut, Peplau, Grant, & Wittig, 2011).

Researchers tested this model within three samples: ethnic minority high school students, ethnic minority college students, and lesbians and gay men. Support for this model was noted among all three populations and was used to predict various forms of well-being, including less depressive and anxiety symptoms, satisfaction with life, and self-esteem. This research supports views of self-determination theory in which group relatedness and belonging provide a basis for psychological well-being.

Gaylord-Harden and colleagues (2007) examined the impact of ethnic identity among a sample of African American adolescents. While research has shown that African American adolescents have decreased risk for developing depression and anxiety overall,

this group tends to exhibit more symptoms than other populations. The authors reported that within a large sample of young African American teenagers, perceived social support had a protective effect against depressive symptoms. This effect was partially mediated by ethnic identity. The mediating effect was stronger for females than males indicating that the importance of ethnic identity can vary based on other demographic variables. These findings suggest that social support is related to increased ethnic identity, which protects against depressive symptoms within this population. Moreover, it lends support to the idea that women are more embedded within their ethnic identity than men (Phinney, 1990). This finding may be related to traditional gender roles in which women have more responsibility for passing on traditions of the culture.

Studies have shown that immigrants and some members of minority groups are more susceptible to mental health problems. Enduring the process of immigration can be traumatic or highly stressful unto itself. Within a sample of young adolescent immigrants, self-esteem mediated the relationship between ethnic identity crises and poor mental health (Oppedal, Røysamb, & Sam, 2004). Experiencing a crisis in one's identity negatively influenced self-esteem, which then has a negative influence on illness. Moreover, exploration of one's own culture as well as the dominant culture positively influences social support, which decreases the occurrence of mental health concerns. The authors further indicate that when social support was high among this sample, the impact of crises in one's identity exploration was lessened.

Some researchers have worked to extend this idea that an achieved ethnic identity can act as a protective factor in the face of everyday stressors and traumatic events. In her study of Latino university students, Orozco (2008) found that ethnic identity was

significantly positively correlated with perceived family social support and resilience, defined in this study as increased ability to cope with stress. Moreover, ethnic identity and social support were both significant positive predictors of resilience when a multiple regression analysis was performed. Ethnic identity has also been related to aspects of posttraumatic growth, such as seeking out meaning in life and in stressful life events (Kiang & Fuligni, 2010).

Ethnic identity can also increase the occurrence of PTSD symptoms under some conditions. For example, ethnic identity is correlated with an increase in PTSD symptoms when the traumatic event is directly related to one's ethnicity or ethnic identity. In a study of college students from a variety of ethnic backgrounds, Khaylis and colleagues (2007) found that ethnic identity moderated the effect of race-related stress on PTSD symptoms. Specifically, when both ethnic identity and the occurrence of race-related stressors were high, individuals tended to experience more PTSD. Thus, if a significant life stressor is directly related to an important aspect of personal identity, it may create high levels of distress. This finding runs contrary to research on non-race related stressful life events, which indicates that ethnic identity acts as a protective factor against PTSD (Phinney, 1990).

Similar results were reported within a qualitative analysis of interviews with non-Western interpreters who had experienced a traumatic event in their country of origin. Johnson, Thompson, and Downs (2009) found that individuals who felt the traumatic event was directly related to their ethnicity experienced strong feelings of victimization. However, within this population, participants felt that this form of traumatic event was also normalized for them in that they could see the trauma within a larger context of

oppression, allowing for increased social support from the rest of the cultural community. An additional theme emerged related to cultural protection and growth. Those who were not as connected to their cultural identity experienced greater shock when faced with traumatic events (Johnson et al., 2009).

In a similar vein, the experience of a traumatic event that is experienced by others within one's cultural group can be adaptive in the recovery process. Kellezi, Reicher, and Cassidy (2009) studied the effects of appraisal, social support, and coping on indicators of well-being in a sample of Kosovo Albanians who experienced war. When individuals strongly identified as a member of their cultural and ethnic group or when they experienced traumatic events as a group, they were less likely to experience depressive and anxiety symptoms. These protective group experiences had an effect on their perceptions of social support. A major limitation of this study was that it looked at a very specific group and specific set of traumatic events. The impact of social identity on social support and trauma outcomes should be explored in other settings, such as within a North American context and in relation to non-war traumas.

Research examining the direct effects of ethnic identity on posttraumatic growth has not yet been performed. The studies discussed indicate that individuals who have developed ethnic identities and a commitment to their ethnic group can experience a variety of benefits from this group in times of crisis. Though increases in PTSD symptoms have also been found when the traumatic event experienced is related to ethnicity or race, this distress can foster growth in many instances. Further, individuals feel they are supported by the larger community when collective stressors occur that are related to their ethnic identity and community group.

The present research on ethnic identity suggests that the social support gained from ethnic community members appears to alleviate some distress when trauma occurs, possibly through a process of reprocessing and finding meaning from the distress. This specific form of social support has not been thoroughly tested in relation to ethnic groups. Previous research examining the role of religious identity and religious community involvement has found an inverse relation between emotional distress and church attendance (Pargament, 2002). This relation was mediated not by secular social support, but by the religious social support gained from members of their religious congregation. Therefore, the support gained from a community group based on an important part of identity may be more important than one's general support network unrelated to religious or ethnic identity.

Similar findings were evident in a study by Greenfield and Marks (2007), in which the relation between formal religious involvement and forming a religious identity was tested in the prediction of psychological well-being. Respondents were a diverse sample of over 3,000 English-speaking Americans, representing a composite of the U.S. population on demographic factors such as race, sex, and age. Initial results indicated that religious participation predicted positive and negative affect, and life satisfaction. However, when religious social identity was included within the model, it fully mediated the relation between religious participation and well-being. Therefore, identifying with a group of individuals is crucial in benefiting from group involvement. In accordance with self-determination theory (Ryan & Deci, 2000), individuals may internalize useful values and beliefs about themselves, others, and the world around them through religious group identification. Moreover, group identification may allow the individual to use assistance

gained from the religious group to take action regarding pro-growth goals during times of stress.

Though findings in the area of group identity and well-being are promising, research needs to be performed to see if these relations between identity, involvement, and support can be applied to ethnic identity. Moreover, though general benefits have been found from developing a group identity, research specifically examining posttrauma reactions, and PTG in particular, within one's social context is crucial to better understand the benefits of group identity. When significant results have been found in this area, they have been grounded within particular groups who may have unique cultural features, such as Israelis and Palestinians within Dekel and Nuttman-Shwartz's studies (2009, 2011). Additionally, the traumatic events experienced have often related to war and other extreme situations. Therefore, there is a need to replicate the significant relations between group identity, PTG, and social support within diverse samples and with different traumatic experiences.

The Current Study

The present study aimed to expand research on posttrauma functioning in a variety of ways. Previous research examining ethnic identity, group commitment, and trauma outcomes has focused on very specific groups and uppercase 'T' Traumas. Therefore, there is a need to test previously identified relations within an ethnically diverse, Canadian population. The use of this population allows for analysis across ethnic and cultural groups in order to identify how social support and ethnic identity contribute to PTG within a multicultural Canadian context.

Though diverse populations are beneficial to test for the generalizability of certain findings, specificity with trauma type is recommended as all forms of traumatic and stressful life events are not created equally (Kira, 2001). Previous research has focused primarily on highly traumatic events, but individuals have been found to have the capacity to grow from lowercase 't' traumas, such as the loss of important relationships. As indicated within the literature, individuals commonly experience relationship loss and dissolution that can have significant negative, but also positive impacts on functioning. Within PTG literature, Calhoun and Tedeschi (2006) have found that relationship losses can have a particular impact on social supports that assist with growth. When a relationship with an important other is lost, individuals are required to seek out supports from other sources that they may not have used extensively in the past. These sources then fill the gaps left by the relationship that is no longer a viable support. Relationship loss stressors are often personally traumatic events that are closely tied to turning to other group members for support (Harvey, 2002). Therefore, the present study focused on these forms of traumatic events to test the research questions outlined below.

A primary goal of the research was to test the relations of PTG and PTSD symptomology to ethnic identity. To date, research has been performed that examined the importance of group identification with growth. For example, religious identification has been found to relate strongly to growth (Prati & Pietrantonio, 2009). Moreover, the strength of one's religious commitment is more related to growth than the religion that one identifies with (Taku & Cann, 2014). In the area of ethnicity and ethnic identity, studies have shown that group differences in PTG exist based on ethnicity, but no studies

have yet identified the relation of PTG and PTSD to the development of an ethnic identity. Therefore, the first research question for the present study was as follows:

Research question 1. What is the relation between trauma outcomes (PTG and PTSD symptoms) and aspects of ethnic identity within a Canadian university sample following a significant relationship loss?

The following hypothesis was tested:

Hypothesis 1. Ethnic identity commitment and ethnic identity exploration will be significantly related to trauma outcomes.

1a) Ethnic identity commitment and ethnic identity exploration will significantly positively predict PTG when controlling for identified covariates within a regression analysis.

1b) Ethnic identity commitment and ethnic identity exploration will significantly negatively predict PTSD symptoms when controlling for identified covariates within a regression analysis.

The identification of covariates is an important aspect of these hypotheses because demographic variables, characteristics of the loss event itself, and social desirability have been found to impact PTG following trauma and loss. Previous research has also shown some inconsistencies in the relation between PTSD symptomology and PTG. As indicated, PTSD definitions tend to assume that one traumatic event caused the constellation of symptoms experienced as PTSD. Research is beginning to emerge that indicates that functioning is better predicted by the cumulative effect of traumatic and stressful life events across the lifespan. Within the current research, the trauma histories of participants may impact the degree of growth that they experience following a specific

loss. As indicated in Kira and colleagues' (Kira, Lewandowski et al., 2008) conceptualization of cumulative trauma, individuals may experience core traumas that add up over time and impact the individual to some degree until a triggering trauma occurs that causes a sharp decrease in functioning, increase in pathology, or other trauma outcomes. Within the present study, the relationship loss trauma may be a core trauma or a triggering trauma. Therefore, the frequency of previous traumas was included in the analyses as a covariate to see whether outcomes were impacted by cumulative trauma exposure, as well as whether proposed relations were significant when controlling for previous trauma exposure.

In addition to research on the relation between group identification and posttrauma functioning, other research has shown that group involvement and group identity can exert influence on posttrauma outcomes through the social support received from different sources. As indicated by Pargament (2002), social support was key in identifying the relation between religious group identification and trauma outcomes. Moreover, when social support is received from individuals who share commitment to a specific group, the effect of the support is enhanced. Though these relations have not yet been tested with ethnic identity, ethnic and religious groups share many similar features. For example, both groups provide a conceptual framework within which to understand loss and trauma. As well, each group has specific coping strategies, traditions, and practices related to crisis and stress that can benefit an individual during times of loss. Therefore, an additional purpose of the present study was to examine how different sources of social support, specifically one's general community as compared to one's

ethnic group, differentially impact the growth process, as captured within the second research question:

Research question 2. What is the role of social support from one's ethnic community in the growth process as compared to general social support?

The following hypotheses were proposed to test the second research question:

Hypothesis 2. Social support from one's ethnic group will have greater relative importance than general social support in the prediction of PTG following loss when controlling for significant covariates and correlations among variables.

Hypothesis 3. Social support from one's ethnic group will mediate the effect of ethnic identity commitment upon PTG when controlling for covariates.

Overall, research focusing on ethnic identity and supports received from one's ethnic group has been minimal. Ethnic group specific supports have neither been examined in relation to specific trauma outcomes, such as PTG, nor general outcomes following stress and loss. Yet, as indicated by self-determination theory (Ryan & Deci, 2000) and Calhoun and Tedeschi's (2006) model of PTG, others within individuals' social surroundings and ethnic group can have a large impact on the how individuals react following loss and the effort they take to recover and grow from the experience. In addition to research examining specific relations between support and ethnic identity, as outlined above, research is required that broadly examines opinions about interactions with one's ethnic group. These general findings can direct and inform future research in more specific areas of posttrauma and postloss functioning. Therefore, the present study aimed to gain more all-encompassing information about the importance of interactions

with ethnic group members in the face of significant relationship losses by asking the following research question:

Research question 3. In what ways does one's ethnic group contribute to postloss functioning?

Often, individuals are not familiar with the term 'posttraumatic growth' and the changes that they have experienced following trauma or loss are not always readily evident to respondents (Park & Helgeson, 2006). Moreover, PTG is not the only possible outcome following relationship losses. Individuals can experience PTSD symptoms, return to baseline functioning, or experience a mixture of these outcomes. For this research question the goal was not to focus on one specific outcome, but rather gain information about how ethnic group members contributed to each individual's unique recovery process. Therefore, general questions were asked in the present study related to coping and recovery from loss to begin the examination of ethnic group contributions. Though the concepts of coping, recovery, and PTG are not identical, research has shown that they share similar predictors that can inform research on different areas of postloss functioning. No specific hypotheses were put forth to answer this final research question, but rather trends in qualitative comments regarding participants' opinions about the contributions of ethnic group members were explored to further understand the influence of one's ethnic group on functioning, and provide a context within which to interpret quantitative results within the present study.

CHAPTER III

Method

Participants

Participants for this study were 183 University of Windsor undergraduate students who had experienced a relationship loss in the past eight years. Participants were recruited using the Psychology Department Participant Pool and participated in the study between November 2012 and January 2013. Demographic information for the 183 participants is included in Table 1. The majority of respondents were female (87.4%), and the mean age of participants was 20.70 ($SD = 3.35$) with a range of 17 to 43 years old. As is expected within a university population, age of participants was skewed and reflected the younger age of most undergraduate students (Skewness = 3.18, Kurtosis = 14.32).

Participants were recruited using the Psychology Department Participant Pool. Through the Participant Pool, students can earn bonus marks for psychology courses in which they are currently enrolled by participating in research studies. If participants qualified for the present study, they signed up for a time slot which was posted on the Participant Pool website. They were then directed to the study website. Participants earned 0.5 bonus marks for a psychology course of their choice by completing the study. A description of the study and the participation criteria were accessible on the Participant Pool website. Participation criteria indicated that participants should have experienced a distressing relationship loss within the past five years, excluding the past three months. Relationship losses included death of a loved one, separation, divorce, serious relationship breakdown, or forced separation.

Table 1

Categorical Demographic Information of Participants (N = 183).

Variable	<i>n</i>	%
Gender		
Male	23	12.6
Female	160	87.4
Program		
Psychology	88	48.1
Faculty of Arts, Humanities, & Social Sciences (excl. Psych)	34	18.6
Faculty of Science	25	13.7
Health Fields (Faculty of Nursing, Faculty of Human Kinetics)	20	10.9
Odette School of Business	3	1.6
Programs spanning multiple faculties	13	7.1
Year in Program		
First	50	27.3
Second	32	17.5
Third	46	25.1
Fourth	46	25.1
Fifth	7	3.8
Sixth	1	0.5
No response	1	0.5
<i>Con't</i>		

Income		
Less than \$15 000	23	12.6
\$15 000 – 19 999	6	3.3
\$20 000 – 29 999	12	6.6
\$30 000 – 39 999	6	3.3
\$40 000 – 59 999	22	12.0
More than \$60 000	60	32.8
Prefer not to answer	52	28.4
No response	2	1.1
Citizenship		
Canadian citizen	175	95.6
Permanent resident	6	3.3
Landed immigrant	0	0
Refugee	0	0
Student visa	1	0.5
Other	1	0.5
Country of Birth		
Canada	157	85.8
North America (excluding Canada)	1	0.5
Middle East	7	3.8
South Asia	5	2.7
<i>Con't</i>		

East Asia	5	2.7
Europe	4	2.2
Africa	3	1.6
No response	1	0.5
Religious Identification		
Nonreligious/Agnostic/Atheist	25	13.7
Nonreligious, but spiritual	17	9.3
Jewish	0	0
Muslim	12	6.6
Christian/Catholic	114	62.3
Buddhist	1	0.5
Hindu	2	1.1
Unknown	7	3.8
Other	5	2.7
Ethnic Identification		
White, Caucasian, Anglo, European American	139	76.0
Black, African American, or of African descent	4	2.2
Latino or Hispanic	2	1.1
Aboriginal/First Nations	2	1.1
East Asian (e.g., China, Korea, Taiwan)	5	2.7
Southeast Asian (e.g., Cambodia, Indonesia, Laos, Vietnam)	3	1.6
<i>Con't</i>		

South Asian (e.g., India, Pakistan, Sri Lanka)	8	4.4
Arab	12	6.6
Biracial	3	1.6
Multiracial	3	1.6
Other	2	1.1
Ethnic Identification of Mother		
White, Caucasian, Anglo, European American	141	77.0
Black, African American, or of African descent	4	2.2
Latino or Hispanic	2	1.1
Aboriginal/First Nations	1	0.5
East Asian (e.g., China, Korea, Taiwan)	7	3.8
Southeast Asian (e.g., Cambodia, Indonesia, Laos, Vietnam)	2	1.1
South Asian (e.g., India, Pakistan, Sri Lanka)	8	4.4
Arab	13	7.1
Biracial	1	0.5
Multiracial	0	0
Other	3	1.6
No response	1	0.5
Ethnic Identification of Father		
White, Caucasian, Anglo, European American	141	77.0
Black, African American, or of African descent	5	2.7

Con't

Latino or Hispanic	2	1.1
Aboriginal/First Nations	2	1.1
East Asian (e.g., China, Korea, Taiwan)	5	2.7
Southeast Asian (e.g., Cambodia, Indonesia, Laos, Vietnam)	3	1.6
South Asian (e.g., India, Pakistan, Sri Lanka)	8	4.4
Arab	13	7.1
Biracial	2	1.1
Multiracial	0	0
Other	2	1.1

Research is mixed on the timeframe which is required for PTG to occur and often researchers indicate that there is no set pace for growth (Tedeschi & Calhoun, 2004). Studies have found the presence of PTG within weeks following a traumatic event (Yo, Chu, & Yiu, 2008) as well as years following a trauma (Holgerson, Boe, & Holen, 2010). As indicated, the growth process differs across individuals and it is possible that the timeframe for different aspects of growth differs based on the individual and the event experienced. For example, individuals may experience increased closeness with others in the shortterm, but take longer to develop a greater appreciation for life (Cohen, Hettler, & Pane, 1998). Studies with university students have used a range of timeframes for trauma and loss including within the past six to eight months (Cann, et al., 2011), over one year prior (Hawley & Mahoney, 2013), within the past three years (Cann, Calhoun, Tedeschi, & Solomon, 2010), within the past five years (Taku, 2011), in the latter half of one's life so the loss did not occur in early childhood (Michael & Snyder, 2005), and at any point within the lifetime (Arikan & Karanci, 2012).

For the present study, a general timeframe of four to sixty months postloss was imposed in order to maintain the validity of participant responses. This study sampled participants at one time point. Thus if an extended period of time elapsed since the relationship loss, participants may not be able to accurately reflect on their true experience directly following the loss, which would introduce additional bias into the results. Moreover, individuals who experienced a very recent relationship loss and had not yet had time to begin the growth process were discouraged from participating in the research.

In spite of the designated timeframe, many individuals who participated in the study had experienced a loss less than four months or more than five years prior. These individuals were not automatically rejected from the study due to the varied research on the impact of elapsed time on PTG. Rather, results of participants who experienced a relationship loss outside the designated timeframe were compared to participants who experienced their loss between four months and five years prior to completing the survey. Results of these analyses are below and were found to be nonsignificant; therefore the timeframe of the relationship loss was extended to between one month and eight years prior to completing the survey. Potential participants indicated at the outset of the study whether they had experienced a qualifying event.

Measures

All measures and instrumentation are summarized in Table 2 and described in detail below. When required, permission was received to use testing materials within the context of this research. In accordance with recommendations of the authors of the measures, slight alterations in study instructions were made where indicated in order to reflect a Canadian sample and the purpose of the present study.

Relationship loss identification. Information was gained about the relationship loss in two ways. First, prospective participants responded to screening questions at the outset of the study which provided them with a description of relationship loss and asked whether they: a) experienced a relationship loss that caused them stress and/or sadness, and b) whether this event occurred within the past five years excluding the past three months. Details of the screening questions can be found in Appendix A.

Table 2

Measures.

Variable	Measure	Items	Scale	Score Range	Subscales	Reliability
Details of Relationship Loss	Screening Questions	cc				
	Relationship Loss Questionnaire					
PTG	Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996)	21 items	6-point Likert scale; I did not experience this change as a result of my crisis (0) to I experienced this change to a great degree (5)	0 – 105	Full scale used	$\alpha = .90 - .96$ Retest: $r = .71$ Current Study: $\alpha = .94$
PTSD Symptoms	Posttraumatic Stress Disorder Checklist – Civilian Version (PCL-C) (Weathers et al., 1993)	17 items	5-point Likert scale; Not at all (1) to Extremely (5)	17 – 85	Full scale used	$\alpha = .91 - .96$ Retest: $r = .87$ Current Study: $\alpha = .93$
Ethnic Identity	Multigroup Ethnic Identity Measure – Revised (MEIM-R) (Phinney & Ong, 2007)	6 items	5-point Likert scale; Strongly disagree (1) to Strongly agree (5)	6 – 30	Commitment (3 items) Exploration (3 items)	$\alpha = .81 - .89$ Scales: $\alpha = .76 - .91$ Current Study: $\alpha = .88 - .90$

Con't

General Social Support	Interpersonal Support Evaluation List (ISEL) (Cohen & Hoberman, 1983)	40 items	4-point Likert scale; Definitely false (0) to Definitely true (3)	0 – 120	Belonging (10 items) Appraisal (10 items) Self-Esteem (10 items)	Total Scale: $\alpha = .88 - .90$ Retest: $r = .87$ Current Study: $\alpha = .94$ Subscales: $\alpha = .62 - .82$
Social Support from Ethnic Community (Ethnic Support)	Interpersonal Support Evaluation List (ISEL) (Cohen & Hoberman, 1983) Altered instructions described in detail below.	40 items	4-point Likert scale; Definitely false (0) to Definitely true (3)	0 – 120	Tangible (10 items) Belonging (10 items) Appraisal (10 items) Self-Esteem (10 items) Tangible (10 items)	Retest: $r = .67 - .85$ Current Study: $\alpha = .81 - .87$ Total Scale: $\alpha = .88 - .90$ Retest: $r = .87$ Current Study: $\alpha = .95$ Subscales: $\alpha = .62 - .82$

Con't

Previous Traumatic Events	Cumulative Trauma Scale – Short Form (CTS) (Kira, Lewandowski et al., 2008)	33 items	Frequency of trauma: 5-point Likert scale; Never (0) to Many Times, More than 4 Times (5) Appraisal of trauma: 7-point Likert scale; I was affected extremely positively(1) to I was affected extremely negatively (7)	Frequency: 0 – 165 Appraisal: 33 – 231	Only the Frequency subscale was used in the present analyses.	$\alpha = .80 - .92$ Current Study: $\alpha = .84$
Social Desirability	Form C of the Marlow-Crowne Social Desirability Scale (MC-C) (Reynolds, 1982)	13 items	True-False	0 – 13	Full scale used	$KR20 = .76$ $\alpha = .74$ Current Study: $\alpha = .72$
Demographics	Demographic Questionnaire					
Perceptions of Ethnic Group Impact	Qualitative Questionnaire	3 items				

Participants provided more details about their relationship loss within the Relationship Loss Questionnaire (see Appendix B). They were asked to think of a specific relationship loss they had experienced within the given timeframe. If they had experienced more than one loss, they were asked to think about the loss that most affected them at the time of completing the study. For this loss, they identified the type of relationship loss from a list which included death of a loved one, separation, divorce, serious relationship breakdown, or forced separation. If a participant had experienced an event that they felt qualified as a distressing relationship loss but was not included in the list, they were asked to include a brief description of the event which was reviewed by the researcher to ensure the event qualified as a relationship loss. All participants were asked to indicate when the relationship loss occurred (in order to calculate the time elapsed since the loss) and the nature of the relationship (spouse, parent, sibling, friend, etc.). They also indicated how sudden the loss was on a 7-point Likert scale ranging from ‘Happened very suddenly’ (1) to ‘Happened over a number of years’ (7). Participants rated the amount of distress that they experienced at the time of the loss on a 7-point Likert scale. See Appendix B for detailed questions and items.

Posttraumatic growth. The Posttraumatic Growth Inventory, developed by Tedeschi and Calhoun (1996), consists of 21 self-report items related to the participant’s experience posttrauma. The participants were asked to respond to each item on a six-point scale, ranging from ‘I did not experience this change as a result of my relationship loss’ (0) to ‘I experienced this change to a very great degree as a result of my relationship loss’ (5). Items include ‘I’m more likely to try to change things which need changing,’ ‘A better understanding of spiritual matters,’ and ‘Appreciating each day.’ Scores can range

from 0 to 105, with higher scores representing more growth following the traumatic event, and the full range of scores was present in the current study.

This scale is the leading measure for posttraumatic growth. It corresponds closely to Tedeschi and Calhoun's model of posttraumatic growth (2004). The PTGI has been used with multiple populations suffering from multiple types of traumas (Dirik & Karanci, 2008; Engelkemeyer & Marwit, 2008; Erbes et al., 2005; Taku, 2011) and has been translated into a number of languages for use across cultures. A recent validation study that examined participants' qualitative understandings of the PTGI items found that content validity of the PTGI was sound (Shakespeare-Finch, Martinek, Tedeschi, & Calhoun, 2013). The overall scale has been found to be reliable across different cultures and languages, but the factor structure that was found within the North American context does not remain consistent when other cultural groups are taken into account (Weiss & Berger, 2010). Within the North American context, the PTGI was found to consist of five factors: a new appreciation for life, stronger connection to others, realization of one's personal strengths, recognition of new possibilities in one's life, and increased spirituality and religiousness. Levine and colleagues (2008) have found that a two-factor structure consisting of outward bound growth and intrapersonal growth is more consistent within traditional societies, such as religious Jews in Israel and Chinese populations. Other authors have found three factor structures that vary according to culture when tested within Albanian (personal strength/new possibilities, relating to others, appreciation for life; Weiss & Berger, 2010), Arabic (social, individual, spiritual/philosophical; Salo et al., 2005), and Latino American populations (philosophy of life, self/positive life attitude, interpersonal relationships; Weiss & Berger, 2006). Still other studies have found that a

single factor representing overall growth is most appropriate, such as within a sample of Korean cancer survivors (Yi & Kim, 2014). These differences in the factor structure may reflect differences in how each culture views factors such as relationships, the self, and spirituality. For example, within Japanese samples, the spiritual change and appreciation of life factors were included in the same factor, possibly reflecting the importance of gratefulness within spiritual functioning (Taku et al., 2007). These results indicate that the exact factor structure is influenced by the combination of culture, ethnicity, and country of origin.

In spite of the differences in factor structures across different cultural and ethnic groups, the internal consistency and reliability of the PTGI has been found to be consistently high. Tedeschi and Calhoun (1996) originally validated the PTGI with a sample of undergraduate students who had experienced a traumatic event within the past five years. They found the internal consistency of the scale to be high ($\alpha = .90$), with subscale internal consistency ranging from .67 to .85. Test-retest reliability over two months was found to be adequate ($r = .71$). Within this original sample, women were found to respond with higher levels of growth. Since the original validation study, researchers have found similarly high reliability for the total scale across different populations. For example, the scale has been a reliable measure of growth within Israeli ex-POWs ($\alpha = .94$; Dekel et al., 2011), individuals with heart disease in the UK and US ($\alpha = .96$; Sheikh, 2004), a large sample of predominantly Hispanic adolescents struggling with a variety of negative life events ($\alpha = .93$; Milam et al., 2004), and HIV-positive survivors of Hurricane Katrina ($\alpha = .96$; Cieslak et al., 2009). Based on group differences seen in the factor structure of the PTGI, yet consistently high overall reliability of the

full-scale measure, the total scale score of the PTGI was used for the present analyses. By using the total scale, skewed results based on cultural differences in the understanding and importance of the components of PTG were reduced. Compared to previous studies that used the total PTGI scale scores, similarly high reliability was found within the present sample ($\alpha = .94$).

Posttraumatic stress symptoms. The Posttraumatic Stress Disorder Checklist – Civilian Version (PCL-C) was developed by Weathers and colleagues (1993) as a self-report rating scale to assess the symptoms of PTSD as defined in the DSM-IV-TR. This measure is easily administered, and maps well onto the 17 symptoms characteristic of the DSM-IV-TR definition of PTSD, with one item asking about each specific symptom. Following broad instructions to ‘respond to the following questions about your relationship loss,’ participants read the following instructions for the PCL-C: ‘Below is a list of problems and complaints that people have in response to stressful life experiences. Please read each one carefully and indicate how much you have been bothered by that problem in the past month.’ Participants respond to each item on a 5-point Likert scale ranging from ‘Not at all’ (1) to ‘Extremely’ (5). Scores can range from 17 to 85 with higher scores indicative of more PTSD symptomology. The total score can be used to derive an overall picture of PTSD symptoms, or the scale can be divided into three subscales representing the three clusters of symptoms in the DSM-IV-TR (Weathers et al, 1993). For the present study, the total score was used and ranged from 17 to 78.

The original validation of the PCL was performed with a military version of the scale which included slightly altered instructions relating to stressful military experiences. The studies consisted of one sample of male Vietnam veterans and one large

mixed sample of Persian Gulf veterans. The overall internal consistency for these two samples was very high (.97 and .96, respectively), likely attributable to similarity in items within symptom clusters. The scale authors also identified a cut-off of 50 indicating the presence of PTSD within the military sample (Weathers et al., 1993). A subsequent study noted that a cut-off of 44 is more sensitive to PTSD symptoms among non-military populations (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). Since its creation, the scale's psychometric properties have been tested in a wide range of samples. In a recent review of seven different self-report measures of PTSD, the PCL-C was found to be one of the best measures of self-reported PTSD (Adkins, Weathers, McDevitt-Murphy, & Daniels, 2008). Among this sample of over 100 college students who had experienced a wide range of traumatic events, internal consistency was found to be .91. Adkins and colleagues (2008) found high test-retest reliability of the scale after an interval of approximately one week ($r = .87$). The PCL-C also significantly correlated with other measures of PTSD, including the Posttraumatic Stress Diagnostic Scale ($r = .78$) and the Penn Inventory of PTSD ($r = .66$), and these correlations were stronger than those seen between the PCL-C and measures of depression ($r = .63$), anxiety ($r = .48$), and social phobia ($r = .41$).

The PCL-C has been used within a number of studies specifically comparing PTSD symptoms with evidence of growth. Cieslak and colleagues (2009) found good internal reliability for this scale among HIV-positive survivors of Hurricane Katrina ($\alpha = .93$). Moreover, they found that reports of PTSD symptoms were significantly positively correlated with reports of growth after Hurricane Katrina. PCL scores were also found to have a significant positive correlation with PTG among a sample of women

who had been diagnosed or were at risk for developing gynaecologic cancers (Posluszny, Baum, Edwards, & Dew, 2011). Internal consistency on the PCL among these women reflected the high reliability found in previous studies ($\alpha = .96$). The present study indicated a similar level of internal consistency ($\alpha = .93$) with 81 participants (44.3%) reaching or exceeding the cut-off for a likely PTSD diagnosis.

Ethnic identity. The Multigroup Ethnic Identity Measure – Revised (MEIM – R; Phinney & Ong, 2007) is a 6-item scale that measures the development of ethnic identity over two factors: exploration and commitment. Each subscale has three items which respondents rate on a 5-point Likert scale ranging from ‘Strongly disagree’ (1) to ‘Strongly agree’ (5). The mean of the three items represents the score on each subscale; therefore scores can range from 1 to 5 with higher scores representing greater ethnic identity exploration or ethnic identity commitment. It also includes open and closed ended questions about ethnic label (see Appendix C). The scale is preceded by a description of ethnic identity which includes a short list of examples of identities that can be adapted to suit the population being sampled within the present study (Phinney, 1992).

The original MEIM was developed by Phinney (1992) and was used widely in ethnic identity research. It tried to assess different aspects of ethnic identity, including ethnic behaviours, ethnic affirmation and belonging, and ethnic identity achievement, as well as questions about how one relates to other groups. The factor structure of the original scale was found to be inconsistent, but could be broadly broken down into questions related to Ethnic Identity and items related to Other Group Orientation (Worrell, Conyers, Mpofu, & Vandiver, 2006). The MEIM was validated among a large diverse sample of high school and college students in the United States (Phinney, 1992).

Internal consistency of the Ethnic Identity items was found to be high, ranging from .81 to .90; whereas internal consistency of the Other Group Orientation items was lower (.71 – .74).

Further analysis of the MEIM by Phinney and Ong (2007) elicited two important aspects: ethnic identity exploration and commitment to ethnic identity. Moreover, other factors included in the original MEIM could be more relevant for some ethnic groups than others (i.e., involvement in ethnic behaviours). The original scale was revised to represent these two components of ethnic identity and exclude other factors. Factor analysis of a 12-item scale (six items per subscale) was performed with a diverse sample of university students, and the three items with the lowest factor loadings were removed from the scale, resulting in the 6-item measure. This final measure, the MEIM-R, was validated using a large, independent university sample. This sample was diverse, with 51% of participants identifying as Latino, 26% identifying as Asian America, 9% identifying as European American, and 14% of mixed or other heritage. A two-factor model allowing the scales to correlate with one another was the best fit for the data, compared to a one-factor model, two-factor uncorrelated model, and single second order model. The scale showed adequate reliability with an overall Cronbach's alpha of .81, and each subscale also showing good reliability (.76 for exploration and .78 for commitment). The two scales were found to be significantly positively correlated ($r = .74$).

Yoon (2011) performed an independent validation study of the MEIM-R in a multiethnic sample of university students. This study added to previous validation literature by separating the sample into European American (dominant) and minority

groups. The internal consistency of the MEIM-R was high and fairly similar across these two groups (.91 and .87 for exploration, .84 and .88 for commitment, and .89 and .88 for the combined scale). The two-factor structure proposed by Phinney and Ong (2007) was also supported within both groups. A higher mean score for both subscales of the MEIM-R was reported for the minority sample as compared to the European American sample (Yoon, 2011). Similarly high subscale reliability was found in the present study (.90 for exploration and .88 for commitment).

General social support. The Interpersonal Support Evaluation List (ISEL; Cohen & Hoberman, 1983) is a 40-item measure developed to assess the impact of perceived social support on well-being within the general population. The measure is comprised of four subscales, each containing 10 questions: belonging or companionship support, appraisal (someone to gain emotional support from and talk to about the problem), self-esteem through social comparison, and instrumental or tangible support. Respondents indicate on a 4-point Likert type scale whether they believe each statement is ‘definitely false’ (0), ‘probably false’ (1), ‘probably true’ (2), or ‘definitely true’ (3). The items of the ISEL are counterbalanced to reflect both positive and negative aspects of social relationships. Respondents were asked to think about the relationships they have with all members of their social group (friends, classmates, family, etc.) as they answered the questions for the measure of general social support. Exact instructions can be found in Appendix D.

The ISEL for the general population, and a slightly longer scale specific to college students, have been validated in a number of studies. An initial review of the validation of the ISEL was reported two years after its publication. Many of the studies reported in

this review used samples of university students and had small sample sizes. Correlations between the subscales were significant, but not high enough for the subscales to be collapsed to reflect a scale of broad social support. The ISEL has adequate concurrent validity in that it significantly correlated with other measures of social support, including the Family Environment Scale ($r = .30$), number of close friends ($r = .46$), and number of close relatives ($r = .42$). Significant correlations were also found between the scale and measures of self-esteem and self-disclosure (Cohen, Mermelstein, Kamarck, & Hoberman, 1985).

The ISEL has been used with a wide range of samples and has been found to maintain its validity within these samples. For example, consistent with previous findings, women's perceptions of social support were greater than perceptions of social support by men within a sample of lower SES and homeless individuals (Bates & Toro, 1999). In a validation study using individuals with serious mental illness, internal consistency for the scale was found to be adequate. However, the self-esteem and belonging factors were not considered conceptually separate and thus were combined to create a three factor structure for the ISEL (Rogers, Anthony, & Lyass, 2004).

Brookings and Bolton (1988) confirmed the four-factor structure of the ISEL within a moderately sized sample of college students. However, they noted that the four factors were likely indicative of a second-order factor, such as general social support. The researchers argue that whereas the ISEL can be seen as a general scale of social support, looking at the total score of all four subscales would cause a loss of valuable and unique information that each scale contains. Therefore, the subscale scores were analyzed as part of the present study.

The reliability of the ISEL has been consistent across various studies and populations. Internal reliability for the total ISEL ranged from .88 to .90 within initial validation studies, with higher reliability being associated with community samples as compared to university samples. The subtest reliability scores were also adequate (appraisal: .70 to .82; self-esteem: .62 to .73; belonging: .73 to .78; and tangible support: .73 to .81). Test-retest reliability was also found to be adequate after a two day interval (total score reliability was .87, subscales ranged from .67 to .84) and after a six month interval (total score reliability was .74, subscales ranged from .49 to .68; Cohen, Mermelstein, Kamarck, & Hoberman, 1985). Adequate reliability for the ISEL has also been found with lower SES and homeless individuals (Bates & Toro, 1999). The test-retest reliability in this sample for each subscale ranged from .62 (belonging) to .85 (tangible), while the total was .81. The reliability of the ISEL for General Support within the current study was found to be strong. Appraisal Support had the highest reliability ($\alpha = .87$), followed by Belonging Support ($\alpha = .85$), and then Tangible Support and Esteem Support (both with $\alpha = .81$). The Total General Support Scale had reliability of $\alpha = .94$.

Ethnic social support. A second administration of the Interpersonal Support Evaluation List (ISEL; Cohen & Hoberman, 1983) was used to measure social support specifically from one's ethnic group. Rather than focusing on all their relationships, participants were asked within this administration to respond to the items of the ISEL thinking only about the relationships they have with members of their ethnic community. A description of ethnic groups and ethnicity was included in the MEIM-R. Exact instructions for administration can be found in Appendix D.

The use of similar or identical measures and items to measure different sources of social support has been well-established. For example, Zimet and colleagues' (1988) Multidimensional Scale of Perceived Social Support asks similar questions related to the respondent's family, friends, and significant other (There is a special person with whom I can share my joys and sorrows; I have friends with whom I can share my joys and sorrows). Identification of the source of social support on this scale was sufficient to extract different levels of social support from different sources. A newer scale of multidimensional social support, The Multidimensional Social Support Questionnaire (Hardesty & Richardson, 2012), also asks respondents to answer very similar questions about support from friends and family separately. Factor analysis of that measure elicited separate, but correlated factors representing support from family and support from friends.

Within the present study, the primary benefit of using the same scale to measure social support from two sources was that direct comparisons could be made between General Support and Ethnic Support. Reliability of the ISEL when used to measure Ethnic Support was similarly high to the General Support administration. Total Scale reliability for Ethnic Support was $\alpha = .95$. Subscale reliability estimates for the Ethnic Support administration were slightly higher than within the first administration of the ISEL (Appraisal Support: $\alpha = .89$; Belonging Support: $\alpha = .88$; Tangible Support: $\alpha = .83$; Esteem Support: $\alpha = .82$).

Previous trauma experiences. A history of trauma can have a large impact on how individuals recover from a current stressor or traumatic event. Kira and colleagues (2001; Kira, Lewandowski et al., 2008) created the Cumulative Trauma Scale (CTS) to

assess the frequency and impact of previous trauma experiences. The short form of this scale used within the present study inquired about 33 different types of traumatic events that individuals may experience across the lifespan. Participants rated each event on the frequency of occurrence from Never (0) to Many or More than Four Times (5).

Participants also indicated how the event affected them on a 7-point Likert scale from Extremely Positive (1) to Extremely Negative (7). This measure can elicit scores on trauma occurrence, trauma frequency, and positive and negative appraisals. For the present study, only trauma frequency was analyzed.

A significant goal of the CTS was to create a scale that inquired about a wide range of trauma experiences and was relevant both within and outside of a Western context. The items were developed based on Kira's theory of trauma taxonomy (Kira, 2001). Factor analysis confirmed that the CTS includes items related to six trauma types: attachment trauma, family trauma, collective identity trauma, personal identity trauma, survival trauma, and secondary trauma (Kira, Fawzi, & Fawzi, 2012). This scale has been used extensively by Kira and colleagues to assess previous trauma exposure and the impact of exposure on various populations. In a large 2008 study of Iraqi refugees living in the Michigan area, reliability (Cronbach's alpha) for the CTS was found to be .85 (Kira, Templin et al., 2008). When the sample was divided between adult and adolescent populations, the scale was more robust for the adult population ($\alpha = .85$), but was still adequate for the adolescent group ($\alpha = .79$). Within a sample of clients of mental health services, reliability was found to be exceptionally high ($\alpha = .98$), indicating that some redundancy may exist among the test items when used within this particular sample (Kira, Fawzi, & Fawzi, 2012). Kira and colleagues have also shown the frequency of

traumatic event exposure on the CTS to be positively related to PTSD symptoms ($r = .54$, $p < .001$) and poor health outcomes ($r = .37$, $p < .001$) among other variables (Kira, Templin et al., 2008). The present study elicited adequate reliability of the frequency subscale with $\alpha = .84$.

Social desirability. Social desirability was measured by Form C of the Marlowe-Crowne Social Desirability Scale (MC-C; Reynolds, 1982). This measure consists of 13 forced choice true-false items assessing an individual's tendency toward impression management. Higher scores on the scale are indicative of a higher occurrence of socially desirable responses. This short-form measure was adapted from the original 33-item Marlowe-Crowne Social Desirability Scale using a sample of over 600 undergraduate student participants. Items with low factor loadings were removed from the scale, eliciting the 13-item shortened scale. Reliability for the scale was adequate ($KR20 = .76$). Significant correlations were also found between MC-C and the original scale ($r = .93$). Within PTG research, reliability for the MC-C has been reported to be in the adequate range ($\alpha = .74$; Salsman, Segerstrom, Brechting, Carlson, & Andrykowski, 2009), and that was the case within the present study as well ($\alpha = .72$). Some researchers indicate that PTG is largely illusory; a product of how one copes with trauma, defensiveness, socially desirable responding, and impression management (Park & Helgeson, 2006). Studies that have directly tested this hypothesis have found that overall PTG is not significantly related to measures of social desirability among cancer survivors (Salsman et al., 2009) and undergraduate students (Wild & Paivio, 2003).

Demographics. Demographic information was collected as part of the measures described (e.g., the MEIM-R asked participants to indicate their ethnic group), and with a

short questionnaire at the conclusion of the study. Information collected included gender, age, program of study and year of study in the program, socioeconomic status, religious identification, ethnicity (of participant and parents), country of birth, and citizenship status. Specific questions can be found in Appendices C and E.

Perceptions of ethnic group impact. A qualitative portion was included within this study in order to assess participants' broad perceptions of how their ethnic community impacted their postloss functioning. The following open-ended questions were administered to all participants:

- 1) How did members of your ethnic group react after you experienced the relationship loss?
- 2) In what ways did your ethnic group help you to cope and recover from the relationship loss?
- 3) In what ways did your ethnic group make it more difficult for you to cope and recover after your relationship loss?

Participants responded to these questions after being exposed to the definition of ethnic identity included within the MEIM-R. Respondents were not asked to identify which ethnic community they were referring to within these questions, which allowed biracial and multiracial individuals the flexibility to choose which community or communities they wanted to comment on within the questions. The goal of the qualitative portion of this study was to examine general trends in the reactions, help, and hindrances of ethnic group members following loss. Therefore, the questions included used general terms related to coping and recovery after loss rather than 'posttraumatic growth' or other such terminology. As there are many possible outcomes following loss, including

positive and negative change across a variety of areas of functioning with no change in others, individuals were allowed to use their own definitions of coping and recovery within their responses. This allowed for respondents to comment on the full range of social supports they received, rather than only those related to changes encompassed within the definition of posttraumatic growth.

Procedure

Use of web-based data collection. The present study employed web-based data collection. Various studies have examined both the advantages and the limitations of this form of research for researchers and participants. Both parties can gain from the convenience of data collection using the internet. Online research is cost-saving and time-saving for the researcher at the time of data collection, as well as during data analysis as data can be easily imported into data analysis software. With the increased use of online services in daily life, participants are comfortable and sometimes prefer completing survey materials from their own home or other settings without the inconvenience of having to physically attend a specific participation appointment. For the present study, the population being recruited was University of Windsor students. The primary method for recruiting research participants within this university setting is through the University of Windsor Psychology Participant Pool, an online system through which students can see what studies are currently underway. The Participant Pool requires that individuals register online for the studies themselves. By having questionnaires that are also completed online, it increases the continuity between registering in the study and completing the questionnaires. Recent studies have also shown that participants are more willing to respond to open-ended and sensitive questions online rather than in person or

through telephone surveys (Busby & Yoshida, 2013). Moreover, online responses tend to be less biased by social desirability (Aust, Diedenhofen, Ullrich, & Musch, 2012).

Disadvantages of online research have also been noted by researchers, and attempts were made to reduce the impact of these within the current study. Historically, a major criticism of web-based studies was the ‘digital divide’, or that internet and computer access is not equally available to all potential participants based on socioeconomic variables (Busby & Yoshida, 2013). Within the present study, complimentary access to internet-enabled computers throughout the University of Windsor campus for students allowed for individuals from diverse backgrounds within the university setting to access the survey material. The ease of survey completion also means that dropout rates are high within online research (Busby & Yoshida, 2013). Within the present study, standard incentives and penalization were used in accordance with University of Windsor Psychology Participant Pool policy to encourage full completion of the study, or appropriate cancellation of participation rather than dropout.

The validity and reliability of web-based survey responses is a significant concern. Aust and colleagues (2012) recommend a variety of checks to ensure the validity and seriousness of survey responses. Within the present study, plausibility checks were employed to ensure that individual responses and groups of responses were plausible based on the population being studied and the survey questions. Important instructions, such as the definition of a relationship loss and to respond to the questions specifically related to that loss, were repeated at different points in order to ensure only those who qualify for the study completed the survey. Instructions were included for each measure administered and were emphasized with bold and larger font. A social

desirability measure was also included to check for specific response styles. Social desirability was then controlled for within the statistical analyses when it was found to have a significant impact on outcome variables.

Confidentiality of participant data is a concern for all research, but can be particularly problematic within online research. Barchard and Williams (2008) provide various recommendations on ways to maintain confidentiality, client safety, and privacy which were employed within the present study and are outlined below. As recommended, informed consent was received and documented within the online questionnaire using clearly marked 'I agree to participate' and 'I do not agree to participate' buttons to reduce confusion. Within online research, participants are unable to immediately ask questions of the researcher related to the purpose of the study and research within the area. As such, Barchard and Williams (2008) suggest that at minimum contact information for the researcher should be provided so that additional information can be gained. For the present study, an information page was provided at the conclusion of this study to answer common questions about the research project, provide contact information for the researcher, and provide contacts for mental health services within their local area.

In accordance with Barchard and Williams' (2008) suggestions regarding a participant's right to withdraw, there were clearly marked buttons indicating how to withdraw from the study and withdraw any data provided throughout the online survey. Information about how to properly withdraw was also included within the consent form. Finally, to ensure the security of the data provided by participants, all data and survey material were kept on secure servers and were password protected in order to maintain the confidentiality of the data. Identifying information used to provide participants with

Participant Pool bonus marks was kept separately from survey data and access to all data was restricted only to the researchers. Though anonymity of client data could not be ensured due to the use of the Participant Pool, the administrators of the pool have protocols to protect the identities of all participants. As well, each participant was assigned a participant number that was used for the data analyses rather than identifying information. In these ways, the disadvantages of online research were lessened, while maximizing the advantages for all those involved with the project.

Survey procedure. Interested participants were directed to a website where they were presented with a consent form (see Appendix F). This form stated that all participation is voluntary and they were free to discontinue the study without penalty. Once participants provided consent, they were asked to respond to the short screening questionnaire (Appendix A) to confirm their eligibility for participating in the survey. Participants who did not respond positively to both screening questions were automatically redirected to a study termination page, thanked for their time, and their participation in the study was discontinued. They were not penalized for signing up for a study for which they did not qualify. In spite of the screening questions, some participants responded positively to both screening questions, but within the study identified a relationship loss which occurred outside the designated timeframe. The treatment of these cases is discussed in detail within the preliminary review of the data.

Eligible participants were asked to complete the Interpersonal Support Evaluation List (ISEL) in reference to their entire social network. Participants were then presented with the following definition of ethnic identity, which, as suggested by Phinney (1992)

was adapted from the original Multigroup Ethnic Identity Measure to reflect the Canadian sample represented in the current study:

People come from a lot of different cultures and there are many different words to describe the different backgrounds or *ethnic groups* that people come from. Some examples of the name of ethnic groups are Mexican-American, Hispanic, Black, Asian-American, Native Canadian, Anglo-American, and White. Every person is born into an ethnic group, or sometimes two groups, but people differ on how important their *ethnicity* is to them, how they feel about it, and how much their behaviour is affected by it.

Respondents indicated what they consider their ethnic group to be (open-ended), followed by the items of the Multigroup Ethnic Identity Measure – Revised (MEIM-R), and closed-ended questions of their ethnicity and the ethnicity of both their parents. Participants were then given explicit instructions to again complete the ISEL, this time in relation only to the support they received from members of their ethnic community.

Participants were then asked to think about their relationship loss that occurred recently and to indicate the type of event from a list of possible relationship losses. Participants were also asked to indicate when the loss occurred, the nature of the relationship, how sudden the loss was, and the level of distress they experienced at the time of the loss. Respondents responded to the Posttraumatic Growth Inventory (PTGI) and Posttraumatic Stress Disorder Checklist – Civilian Version (PCL-C). The qualitative open-ended questions related to participants' perceptions of the impact of their ethnic group, as defined in the description of the MEIM-R, were also presented in the online format with ample space for participants to type their responses. The PTGI, PCL-C, and

open-ended questions were randomly counterbalanced to reduce bias due to order effects. In order to avoid confusion on the part of the respondent, after participants completed all measures related to the relationship loss trauma, they completed the Cumulative Trauma Scale (CTS) which inquired about additional traumas across the lifespan. Finally, respondents completed Form C of the Marlowe-Crowne Social Desirability Scale (MC-C) and a brief demographic questionnaire.

Due to the sensitive nature of the subject matter, at the completion of the study participants were presented with a post-study information form (see Appendix G). The intention of this form was to help reduce any long-lasting negative effects from the study and promote healthy coping. The form included counselling services available to the participants in the Windsor area and at the University of Windsor, which could assist them in coping with the relationship loss and any ongoing problems. The information form also explained some of the important variables within the study, such as posttraumatic growth and ethnic identity. Readings on posttraumatic growth were suggested. Participants were directed to a separate webpage where they entered their school identification (UWin ID) in order to be rewarded 0.5 bonus marks toward a psychology course of their choice. This reward is in accordance with the Participant Pool guidelines.

CHAPTER IV

Results

Quantitative Results

Preliminary review of data. An initial review of the data was performed in SPSS version 20.0. A total of 222 cases was collected that met inclusion criteria based on responses to the screening questions. Six cases were excluded from the analysis due to incomplete survey material, defined as completing less than 67% of items on any given scale within the analysis. Cases with less than 33% missing data on any given scale were included in the analysis to maximize sample size. Missing data were imputed by calculating individual means based on the completed subscale items. Scale scores were computed based on this imputation method (Schafer & Graham, 2002). As discussed previously, all scales were found to have adequate reliability.

The data were reviewed based on trauma theory to ensure that all cases were eligible and appropriate for the study. Individuals who experienced low levels of stress at the time of their relationship loss (below 4 on the stress scale; 14 cases) were excluded from the analysis. This is consistent with research on PTG, indicating that initial stress levels must be moderate to high in order to foster growth following trauma (Cann, et al., 2010). Some participants responded positively to the initial screening question that they had experienced a relationship loss four months to five years prior to completing the study, but indicated within the study itself that the loss occurred outside of this designated timeframe. Therefore, time since the relationship loss was reviewed, and cases with missing or invalid dates of the relationship loss (loss occurring after the individual completed the survey) were omitted from analysis. Additionally, individuals whose

relationship loss occurred in the same month as their survey completion were excluded as opportunity to grow from and process the event are unlikely within such a short time period. Thus, 10 cases were initially omitted based on elapsed time since the traumatic event. An analysis of variance was performed to see if significant differences were found among individuals who experienced the loss within the time specified in the survey instructions (4 months – 60 months), those who experienced a relationship loss less than four months prior to completing the study, and those who experienced a relationship loss more than 60 months prior to study completion. No significant differences (at $p < .05$) were found on any of the dependent variables among these three groups. This is consistent with results from previous research that the timeframe for PTG is not specific (Tedeschi & Calhoun, 2004). Normality was evaluated for the time variable, and a further 3 outliers were removed due to having experienced the relationship loss more than 100 months prior to completing the survey. Qualitative descriptions of ‘other’ responses for the loss event and the relationship that was lost were reviewed to ensure eligibility of all participants. Based on this review, one additional case was omitted as the relationship loss that they described concerned a pet. Whereas the loss of a pet can be equally as stressful as the loss of a human friend, the impact of the loss of a pet on social support may be different from the other losses described in this study. At the conclusion of this review of trauma based variables, the sample size was 188 respondents.

Tests for multivariate outliers were performed and 4 cases were identified as multivariate outliers based on the Mahalanobis distance statistic at $p < .001$. These cases were removed and analyses were rerun, eliciting one additional outlier. Tests for outliers were performed one more time and no additional outliers emerged. The remainder of the

analyses were performed with $N = 183$. This is an adequate sample size based on the power analysis conducted using G*Power software (Cohen, 1990; Faul, Erdfelder, Lang, & Buchner, 2007). Effect size was set at 0.08, which detects a small to moderate effect. The current sample size of 183 exceeded the required sample size of 141 to conduct the proposed analyses.

Relationship loss experience. Participants primarily reported relationship losses related to separation, divorce, or serious relationship breakdown (45.9%), followed by death of a loved one (39.9%). Forced separation and other losses were each experienced by 7.1% of the sample. Other losses were most frequently described as losses related to friendships, such as breakdown of a friendship, loss of a group of friends, or distance within friendships. Overall, the losses experienced were most frequently of a close friend or family member (45.4%), romantic partner (37.2%), father (4.4%), mother (3.3%), and sibling (0.5%). Sixteen respondents (8.7%) reported the loss of other relationships, and one participant (0.5%) did not indicate the type of relationship lost. On average, individuals experienced the relationship loss just over 2 years prior to completing the study ($M = 25.27$, $SD = 19.36$). They experienced moderate to high stress at the time of the loss ($M = 5.91$, $SD = 1.08$) and the loss was only minimally expected ($M = 3.02$, $SD = 1.68$).

Descriptive statistics and statistical assumptions. Means and standard deviations for the study variables can be found in Table 3. Normality, skewness, and kurtosis for each of the study variables were reviewed. All variables but one were found to be adequately normally distributed and histograms were analyzed and found to be acceptable in shape. Values for previous trauma exposure (CTS) fell outside the suitable

range (see Table 3). Based on the distribution of scores for the Cumulative Trauma Scale, a square root transformation was performed (Tabachnick & Fidell, 2007) following which the assumption of normality was satisfied (see Table 3).

Preliminary analyses were performed to test for significant covariates among the following variables: previous trauma exposure, relationship loss details (loss type, time since loss, stress at loss, relationship type, suddenness of loss), demographic information (gender, age, program, year of study, income, citizenship status, country of birth, religious affiliation, ethnicity), and social desirability. A series of ANOVAs was performed to test for significant categorical covariates. PTSD symptomology did not significantly differ based on any of the categorical variables tested ($p > .05$). PTG scores were found to be significantly different based on the trauma type experienced, ethnicity, and religious affiliation. Results of these tests are reviewed in more detail below. No significant differences based on gender were found for the outcome variables or any other variables included within the analysis.

Significant group differences were found for PTG based on the trauma type experienced ($F(3, 179) = 5.16, p = .002; R^2 = .08$). Specifically, those who experienced the death of a loved one ($M = 63.00, SD = 21.75$) had significantly higher PTG scores than those who experienced forced separation ($M = 41.18, SD = 19.34$) and ‘other’ losses ($M = 45.18, SD = 21.91$). To incorporate this significant covariate into the analysis, a dummy code was created comparing death of a loved one (1) to all other trauma types (0).

For the initial ANOVA predicting PTG, ethnic group categories that had less than 10 participants were collapsed in order to increase the power in the analysis. Group comparisons were made between individuals identifying as Caucasian, Asian, Arab, and

Table 3

Descriptive Statistics for Continuous Variables (N = 183).

Variable	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
PTG	57.04	22.87	-0.18	-0.47
PTSD	40.83	14.38	0.31	-0.84
General SS	86.99	17.74	-0.59	-0.16
Ethnic SS	85.04	19.17	-0.24	-0.79
EI Exploration	2.78	1.15	0.05	-0.84
EI Commitment	3.21	1.05	-0.14	-0.55
CTS	12.76	11.74	2.13	5.39
CTS Transformed	3.26	1.46	0.80	1.16
Social Desirability	5.44	2.93	0.26	-0.41

Note. PTG = posttraumatic growth; PTSD = posttraumatic stress disorder; SS = social support; EI = ethnic identity; CTS = Cumulative Trauma Scale.

‘other’. Results indicated that significant group differences did exist ($F(3, 179) = 8.18$, $p < .001$; $R^2 = .12$). Specifically, participants identifying as Asian ($M = 76.13$, $SD = 22.14$) scored significantly higher in PTG than those identifying as Caucasian ($M = 56.98$, $SD = 21.06$) and other ethnic groups ($M = 38.26$, $SD = 23.68$). Those identifying as Caucasian also scored significantly higher than the ‘other’ group. No significant differences from the Arab group were found ($M = 57.32$, $SD = 24.82$). Two dummy codes were created in order to represent these ethnic group differences within the analyses: Caucasian participants (0) versus all other participants (1) and Asian participants (0) versus all other participants (1). Though three dummy codes could have been created to compare the four ethnicity groups (Tabachnick & Fidell, 2007), the use of two dummy codes encompassed the significant group differences identified.

In order to test for religious group differences in PTG scores, a similar collapsing was performed for religious group, eliciting the following categories: non-religious and non-spiritual ($M = 50.06$, $SD = 20.24$), non-religious but spiritual ($M = 63.63$, $SD = 18.30$), Muslim ($M = 73.31$, $SD = 25.12$), Christian/Catholic including all denominations ($M = 55.70$, $SD = 22.92$), and ‘other’ ($M = 58.40$, $SD = 24.37$). The ANOVA results showed significant group differences in PTG scores ($F(4, 178) = 2.66$, $p = .034$; $R^2 = .06$). Post-hoc tests revealed that the non-religious and non-spiritual group scored significantly lower in PTG than the Muslim group. A dummy code was created that compares all individuals identifying as non-religious and non-spiritual (0) to those identifying with a specific religion or general spirituality (the remainder of the participants; 1).

Correlations were computed to test for significant relations among the continuous potential covariates and the outcome variables. Cumulative trauma exposure (transformed) was correlated with both PTG ($r(181) = -.15, p < .05$) and PTSD symptoms ($r(181) = .27, p < .01$). Specifically, as the cumulative exposure to previous traumatic events increased (as measured by the square root of CTS), there was an increase in PTSD symptoms reported following the relationship loss and a decrease in reported PTG. A follow-up nonparametric test of the correlation was performed between the nontransformed CTS score and the outcome variables of PTG and PTSD symptoms. The result of this test revealed highly similar results to that of the transformed variable (see Table 4). As no differences in outcomes were evident based on the transformation, and the skewed distribution of this variable is likely representative of actual trauma exposure in the real world, the original CTS score (not transformed) was used within subsequent analyses as a covariate.

The remainder of the correlation analysis results can be found in Table 4. PTSD symptoms were found to be negatively correlated with the amount of time that passed since the loss and positively correlated with the amount of stress at the time of the loss. PTG was unrelated to all continuous trauma loss details, including time since the loss, further supporting the idea that there is no set timeframe in which PTG occurs. Neither PTG nor PTSD was related to continuous demographic variables. Finally, social desirability was negatively correlated with PTSD, but uncorrelated with PTG. Neither a significant linear nor curvilinear relation was found between PTG and PTSD within the present study. The variables described above that were found to significantly relate to the outcome variables were included in the study analyses.

Table 4

Correlations Between Potential Covariates and Outcome Variables.

Variable	PTG	PTSD
Time Since Loss	.04	-.16 *
Stress	.04	.21 **
Suddenness of Loss	.02	-.12
Year in School	-.06	-.13
Age	.09	-.12
Income	.01	-.07
Social Desirability	.13	-.22 **
CTS	-.15 †	.27 ††

Note. PTG = posttraumatic growth; PTSD = posttraumatic stress disorder;

CTS = Cumulative Trauma Scale.

* Correlation significant at $p < .05$

** Correlation significant at $p < .01$

† Spearman's rho significant at $p < .05$

†† Spearman's rho significant at $p < .01$

Tests of multicollinearity and singularity were performed. High correlations were found to exist between general social support and ethnic social support ($r(181) = .89$, $p < .001$), but correlations did not exceed the recommended cutoff of $r = .90$. Therefore, both variables will remain in the analysis. All correlations can be found in Table 5. Review of collinearity statistics, including the tolerance and variance inflation factor (VIF) for all analyses, also indicated that no multicollinearity exists in the data set¹. Follow-up correlations between subscales of social support indicated that no subscales were correlated above the designated cutoff. These significant correlations further indicated that the relations among variables were linear. Scatterplots were also examined to test for the linearity of relations. The assumption of independence of errors was met as the data were collected from a diverse population and responses by any given participant did not depend on the responses of any other participant. The Durbin-Watson statistic was also found to satisfy the assumption of independence of errors (2.00 when predicting PTG, 2.13 when predicting PTSD symptoms).

Hypothesis testing.

Hypothesis 1. Ethnic identity commitment and exploration will be related to trauma outcomes.

1a) Ethnic identity commitment and ethnic identity exploration will significantly positively predict PTG when controlling for identified covariates within a regression analysis.

¹ Tolerance statistics ranged from .19 to .98. The majority of variables had reported tolerance statistics above .50, with only General Social Support and Ethnic Social Support hovering around .20. A similar trend was seen in the VIF statistic with scores ranging 1.03 to 1.89 for most variables, but scores between 5.04 and 5.39 for both social support variables. Though the collinearity scores for the social support variables differed from collinearity scores for the other variables, they are still within the acceptable range to indicate that multicollinearity is not a problem within the dataset.

Table 5

Correlations Between All Independent and Dependent Variables.

Variable	PTG	PTSD	General SS	Ethnic SS	EI Explor.	EI Commit.
PTG	-----	.08	.34 **	.26 **	.24 **	.28 **
PTSD		-----	-.34 **	-.31 **	.12	.06
General SS			-----	.89 **	-.03	.13
Ethnic SS				-----	.00	.18 *
EI Explor.					-----	.62 **
EI Commit.						-----

Note. PTG = posttraumatic growth; PTSD = posttraumatic stress disorder; SS = social support; EI Explor. = ethnic identity exploration; EI Commit. = ethnic identity commitment.

* Correlation significant at $p < .05$

** Correlation significant at $p < .01$

1b) Ethnic identity commitment and ethnic identity exploration will significantly negatively predict PTSD symptoms when controlling for identified covariates within a regression analysis.

Analysis 1. Preliminary correlation analyses were used to test initial relations among the proposed variables.

1a) PTG was positively correlated with both ethnic identity commitment ($r(181) = .28, p < .01$) and ethnic identity exploration ($r(181) = .24, p < .01$) when one-tailed correlation tests were performed.

1b) One-tailed tests of the relation between ethnic identity exploration and PTSD indicated that a significant correlation did exist, but not in the hypothesized direction ($r(181) = .12, p = .049$). Ethnic identity commitment was not significantly related to PTSD symptoms ($r(181) = .06, p = .206$).

In light of the previously identified covariates, regression analyses were performed to test Hypothesis 1 while controlling for the covariates.

1a) A hierarchical regression was performed to predict PTG. Step 1 included the significant covariates identified during data cleaning (CTS, relationship loss dummy code, religious affiliation dummy code, and both ethnicity dummy codes), and was found to be significant ($F(5, 177) = 7.19, p < .001$). As a model, this set of covariates accounted for 16.9% of the variance in PTG (see Table 6). When looking at individual covariates, both ethnicity dummy codes and the relationship loss dummy code were significant contributors of PTG. Step 2 of the regression included the hypothesized variables of ethnic identity commitment and ethnic identity exploration. This step of the regression was also significant ($F(7, 175) = 7.75, p < .001$) and the change in variance accounted for

Table 6

Summary of Hierarchical Regression Analysis for Predicting Posttraumatic Growth.

Variable	Step 1			Step 2		
	<i>B</i>	β	<i>Sr</i> ²	<i>B</i>	β	<i>Sr</i> ²
Ethnicity DC1	-30.76 **	-.38	.097	-28.90 **	-.36	.085
Ethnicity DC2	-12.70 **	-.24	.035	-16.56 **	-.31	.057
Religion DC	9.05	.14	.018	7.56	.11	.012
Trauma DC	8.46 *	.18	.031	7.41 *	.16	.024
CTS.	-0.13	-.07	.003	-0.15	-.08	.005
EI Commit.				2.90	.13	.010
EI Explor.				3.48 †	.18	.016
<i>R</i> ²		.17			.24	
<i>F</i> for <i>R</i> ² change		7.19 **			7.76 **	

Note. DC = dummy code; CTS = Cumulative Trauma Scale; EI Commit. = ethnic identity commitment; EI Explor. = ethnic identity exploration. Ethnicity DC1 represents Asian participants (0) compared to all other groups (1); Ethnicity DC2 represents Caucasian participants (0) compared to all other groups (1); Religion DC represents non-religious and non-spiritual participants (0) compared to all other groups (1); and Trauma DC represents those who experienced death as a loss (1) compared to all other losses (0).

* $p < .05$

** $p < .01$

† $p < .05$ (one-tailed)

by the model was significantly increased to 23.7% (R^2 Change = .07, $p = .001$). Based on one-tailed tests of significance, ethnic identity exploration significantly positively predicted PTG when controlling for variance from covariates ($p = .028$). Ethnic identity commitment was not a significant predictor of PTG ($p = .063$)².

1b) A similar hierarchical regression was performed for PTSD. Step 1 included significant covariates identified through previous testing: CTS, time since the loss, stress at the time of the loss, and social desirability. This step was found to be significant ($F(4,178) = 6.66, p < .001$) and accounted for 13% of the variance in PTSD symptoms. All covariates were found to be significant predictors of PTSD. Step 2 of the regression included the hypothesized variables (ethnic identity commitment and ethnic identity exploration). The regression model remained significant ($F(6,176) = 5.16, p < .001$), but Step 2 did not significantly add to the variance in PTSD symptoms explained from Step 1. Neither ethnic identity commitment nor ethnic identity exploration contributed significantly to PTSD when one-tailed tests of significance were reviewed. Time since the loss, stress at the time of the loss, and social desirability remained significant predictors when ethnic identity variables were included within the regression³. Full results can be found in Table 7.

Follow-up analyses were performed to see if significant results could be obtained by dividing outcome variables into low, medium, and high groups and analyzing group

² Based on the skewed distribution of the CTS, bootstrapping techniques were used to ensure the consistency of results. Results of the bootstrapping support results displayed in Table 6. A nonparametric regression predicting PTG was also performed to see if this would impact results. The results of this nonparametric regression elicited the same overall results and accounted for a similar amount of variance in PTG (25.2%; $F(7,175) = 8.41, p < .001$).

³ Based on the skewed distribution of the CTS, bootstrapping was used to ensure the consistency of results. This technique confirmed results displayed in Table 7. A nonparametric regression predicting PTSD symptoms was also performed to see if this would impact results. The results of this nonparametric regression elicited the same overall results and accounted for a similar amount of variance in PTSD (14.2%; $F(6,176) = 4.84, p < .001$).

Table 7

*Summary of Hierarchical Regression Analysis for Predicting Posttraumatic Stress**Disorder.*

Variable	Step 1			Step 2		
	<i>B</i>	β	<i>Sr</i> ²	<i>B</i>	β	<i>Sr</i> ²
Time Since Loss	-0.11 *	-.15	.023	-0.11 *	-.15	.023
Stress at Loss	2.16 *	.16	.024	2.31 *	.17	.028
Social Desir.	-0.87 *	-.18	.030	-0.99 **	-.20	.038
CTS	0.18 *	.15	.020	0.16	.13	.014
EI Commit.				0.61	.05	.001
EI Explor.				1.39	.11	.007
<i>R</i> ²		.13			.15	
<i>F</i> for <i>R</i> ² change		6.66 **			2.02	

Note. Social Desir. = social desirability; CTS = Cumulative Trauma Scale; EI

Commit. = ethnic identity commitment; EI Explor. = ethnic identity exploration.

* $p < .05$

** $p < .01$

differences. High groups consisted of cases that scored one standard deviation or more above the mean and low groups consisted of cases scoring one standard deviation or more below the mean for the variable. When comparing PTG groups based on ethnic identity commitment, ethnic identity exploration, and ethnicity (as represented by the ethnicity dummy codes), only the ethnicity dummy codes were found to be significant. These results together indicate that the initial relations between ethnic identity commitment, ethnic identity exploration, and PTG are at least partially influenced by ethnicity.

Hypothesis 2. Social support from one's ethnic group will have greater relative importance than general social support in the prediction of PTG following loss when controlling for significant covariates and correlations among variables.

Analysis 2. Lorenzo-Seva, Ferrando, and Chico's (2010) program for interpreting multiple regression results was used to compare the relative importance of social support gained from one's ethnic group and general social support. This program for SPSS is based within a multiple regression analysis, but builds on the standard multiple regression in order to determine both the usefulness and relative importance of variables in the prediction of an outcome variable, in this case PTG following loss. Lorenzo-Seva and colleagues' (2010) program computes the relative weights of each predictor variable, representing the percentage of the variance in the outcome variable that each predictor explains. This method takes into account both direct effects (i.e. structure coefficients) and context dependent effects (i.e. standardized regression coefficients) while controlling for correlations among the independent variables and measurement error. This method of interpreting results is particularly useful when predictors are highly correlated, due to standardized regression coefficients becoming unstable when correlations are high. This

was important within the present study as correlations between general social support and ethnic group social support were significant ($r(181) = .89, p < .001$). This program also takes into account measurement error within the scale which can distort results in a standard multiple regression analysis.

Results of this analysis can be found in Table 8. Based on standardized regression weights, only general social support and the ethnicity dummy codes appear to be significant predictors of PTG. The relative weights were computed and are included within Table 8 as the percentage of variance in PTG explained by each predictor in the model (i.e., the percentage of R^2), after controlling for correlations among the predictors. When the rank order of the relative weights is examined, identifying as Asian or not (ethnicity dummy code 1) is the most important contributor to PTG, with a relative contribution of 31.6%, 95% CI [9.6, 50.5]. General social support, with a relative contribution of 29.2%, 95% CI [11.6, 43.3], was the second most important contributor. It should be noted that the 95% confidence intervals for these two values overlap considerably, therefore the results should be interpreted with some caution and it cannot be conclusively said that one variable is a significantly more important predictor than the other.

Hypothesis 3. Social support from one's ethnic group will mediate the effect of ethnic identity commitment upon PTG when controlling for covariates.

Analysis 3. A mediation analysis was used to test this hypothesis. In order for a mediation to exist, significant correlations must exist between the variable pairs of ethnic identity commitment and PTG, ethnic identity commitment and ethnic social support, and ethnic social support and PTG. These relations were found to be significant, as seen in

Table 8

Summary of Regression Analysis and Relative Importance of Variables for Predicting Posttraumatic Growth.

Variable	B	β	Sr^2	Relative Contribution	95% CI	
					LL	UL
General SS	0.51 *	.39	.030	29.2%	11.6	43.3
Ethnic SS	-0.15	-.13	.003	15.8%	6.6	28.1
CTS	0.02	.01	< .001	3.3%	0.9	15.7
Religion DC	5.50	.08	.006	3.7%	0.2	14.9
Trauma DC	6.20	.13	.016	10.8%	1.2	27.4
Ethnicity DC1	-29.44 **	-.37	.088	31.6%	9.6	50.5
Ethnicity DC2	-9.68 *	-.18	.020	5.6%	2.0	17.2
R^2		.23				
F for R^2 change		7.63 **				

Note. SS = social support; CTS = Cumulative Trauma Scale; DC = dummy code.

Ethnicity DC1 represents Asian participants (0) compared to all other groups (1);

Ethnicity DC2 represents Caucasian participants (0) compared to all other groups (1);

Religion DC represents non-religious and non-spiritual participants (0) compared to all other groups (1); and Trauma DC represents those who experienced death as a loss (1) compared to all other losses (0).

* $p < .05$

** $p < .01$

Table 5. The mediation effect of ethnic social support was tested using Preacher and Hayes' (2008) mediation syntax for SPSS. Through this analysis, it was found that ethnic social support partially mediated the relation between PTG and ethnic identity commitment (95% CI [0.14, 1.95]). Full results can be found in Figure 1. This relation was again tested while controlling for covariates. Previous trauma exposure (coefficient = -0.03) and religion (coefficient = 6.59) did not have a significant partial effect on PTG. However, the partial effects of Ethnicity DC1 (Asian versus other groups; coefficient = -29.17), Ethnicity DC2 (Caucasian versus other groups; coefficient = -13.15), and form of relationship loss (death versus other types; coefficient = 6.33) were also significant at $p < .05$. While controlling for these covariates, the partial mediation effect of ethnic social support remained significant (95% CI [0.08, 1.77]).

Additional analyses. Follow up analyses were performed to explore the potential interactions between ethnicity, ethnic identity commitment, and ethnic identity exploration on PTG. Ethnic identity exploration and ethnic identity commitment were each divided into low (one standard deviation or more below the mean), medium (between one standard deviation below the mean and one standard deviation above the mean), and high groups (one standard deviation above the mean and higher). Four ethnicity groups were used for the present analyses: White, Asian, Arab, and Other.

The first two-way ANOVA was performed with ethnicity and ethnic identity exploration groups predicting PTG and was found to be significant overall ($F(10,172) = 4.40, p < .001; R^2 = .20$). A significant main effect of ethnicity was found ($F(3,172) = 7.55, p < .001$), but no significant main effect of ethnic identity exploration

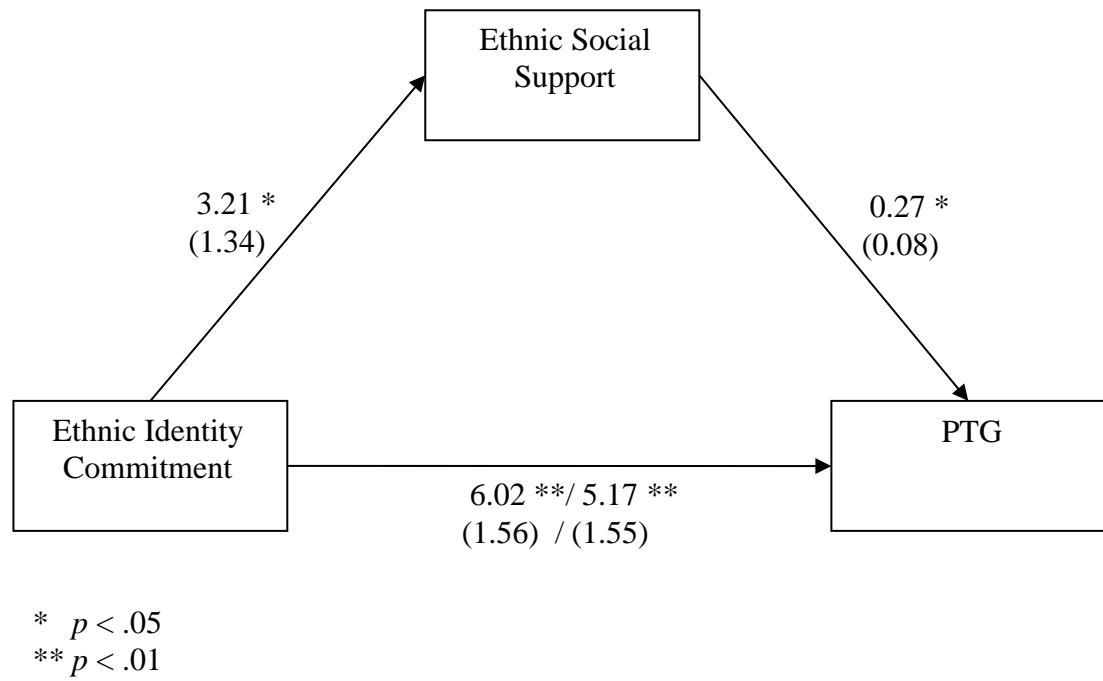


Figure 1. Path analysis for the indirect relationship of ethnic identity commitment on posttraumatic growth as mediated by ethnic social support.

was evident in the data ($F(2,172) = 0.04, p = .961$). A significant interaction was found in that level of ethnic identity exploration moderated the relation between ethnicity and PTG ($F(5,172) = 2.52, p = .031$). This moderation indicates that when ethnic identity exploration is moderate, Asian participants reported higher levels of growth than Caucasian, Arab, and Other participants. The impact of low levels of ethnic identity exploration on PTG differed by group in that Asians with low identity exploration scored lower than their moderate exploration counterparts, whereas low identity exploration among Arab participants elicited higher PTG scores. When the groups experienced high ethnic identity exploration, PTG scores were dampened for Asian participants, but increased for Caucasian and Arab participants compared to those with moderate levels of ethnic identity exploration. Among the ‘other’ group, no participants reported low levels of ethnic identity exploration. Having high ethnic identity exploration and being among this group elicited the lowest PTG scores among all groups. The results of this analysis are visually represented in Figure 2.

Results of the second two-way ANOVA were also significant ($F(11,172) = 3.80, p < .001; R^2 = .20$), and indicated that there was again a significant main effect of ethnicity on PTG scores ($F(3,171) = 4.36, p = .005$). Within this analysis, neither a significant main effect for ethnic identity commitment ($F(2,171) = 0.84, p = .434$) nor a significant interaction between ethnic identity commitment and ethnicity ($F(6,171) = 1.38, p = .224$) were found. Though the interaction was not found to be significant, a visual review of the relations between the variables showed that each ethnicity group may have a slightly different pattern of relations between PTG and level of ethnic identity commitment, but the power within the present study was not large

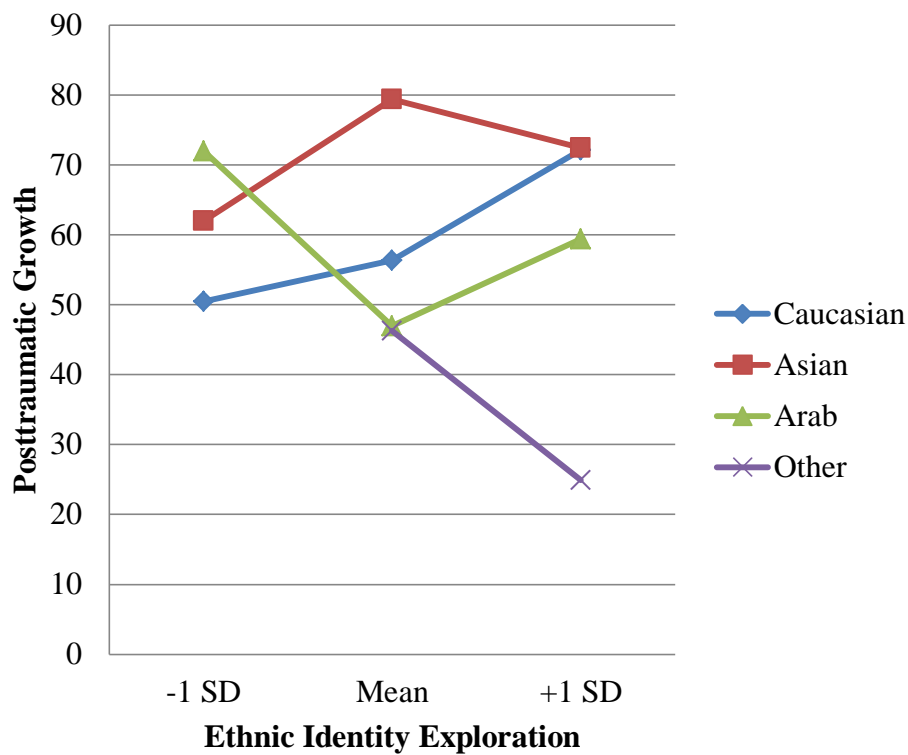


Figure 2. Examination of the effect on posttraumatic growth of the interaction between ethnicity and ethnic identity exploration.

enough to detect statistically significant interactions. See Figure 3 for a visual representation of this two-way ANOVA.

Further analyses were performed to identify the relations and differences between reported subtypes of social support. The goal of these analyses was to note any trends within the quantitative social support data that may also be evident within qualitative responses. Descriptive statistics and correlations with outcome variables for all subtypes of general social support and ethnic group specific social support are reported in Table 9. As would be expected from the analysis of the total scales, all forms of support measured were significantly positively correlated with PTG and negatively correlated with PTSD.

Results of correlation and difference analyses for subscales of social support can be found in Table 10. Correlation analyses indicated that all forms of social support were significantly positively correlated with one another at $p < .05$. Paired samples t-tests, evaluated using a Bonferroni corrected significance level of $p = .003$, did elicit significant differences between the social support subtests. Specifically, all types of general social support are significantly different from one another except for tangible support and appraisal support ($p = .049$). Within the ethnic group specific social support, this difference between tangible and appraisal support remained nonsignificant ($p = .580$). Similarly to general support, all other ethnic specific subtypes of support were found to be significantly different from one another. Additional tests were performed to see if paired subtests from the two administrations of the social support measure were different from one another. Results indicate that general tangible support was significantly higher than its ethnic specific counterpart, but no other differences were found at the stringent significance level of $p = .003$.

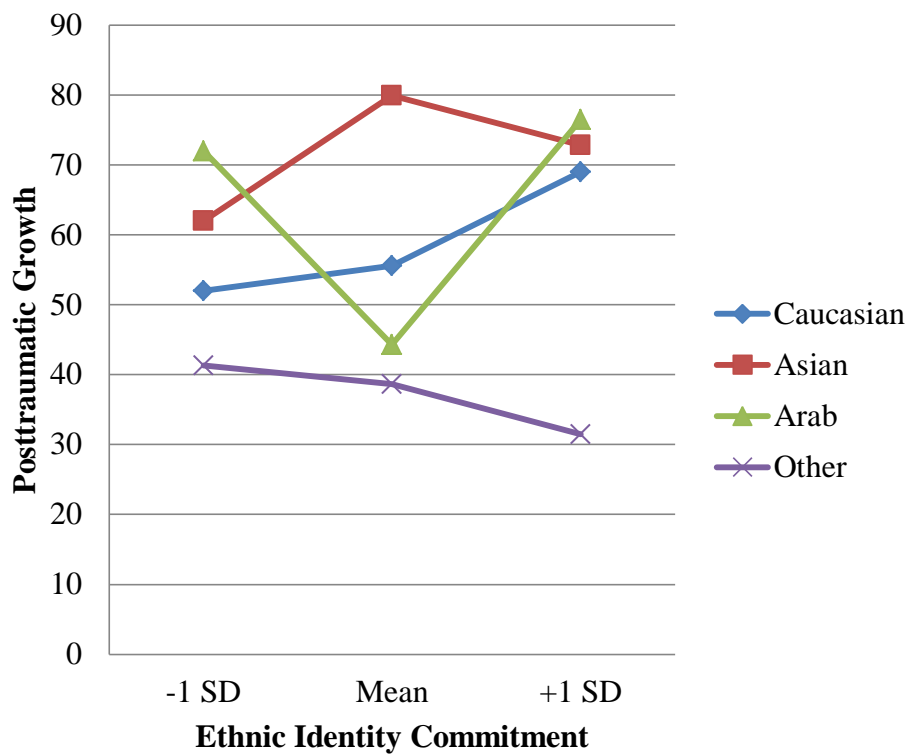


Figure 3. Examination of the effect on posttraumatic growth of the interaction between ethnicity and ethnic identity commitment.

Table 9

Descriptive Statistics for Social Support Subscales and Correlations with Posttraumatic Growth (PTG) and Posttraumatic Stress Disorder (PTSD).

Variable	<i>M</i>	<i>SD</i>	Correlation with	
			PTG	PTSD
General Support				
GS.Appraisal	22.49	5.64	.26 **	-.36 **
GS.Tangible	23.09	4.72	.24 **	-.26 **
GS.Esteem	19.93	4.43	.35 **	-.25 **
GS.Belonging	21.48	5.30	.34 **	-.32 **
Ethnic Support				
ES.Appraisal	22.16	6.03	.21 **	-.33 **
ES.Tangible	21.98	5.47	.16 *	-.25 **
ES.Esteem	19.92	4.49	.33 **	-.22 **
ES.Belonging	20.99	5.70	.26 **	-.27 **

Note. GS = general support; ES = ethnic support.

* $p < .05$

** $p < .01$

Table 10

Correlations and Differences Between Subtests of Social Support.

	General Support				Ethnic Support			
	GS.Appraisal	GS.Tangible	GS.Esteem	GS.Belonging	ES.Appraisal	ES.Tangible	ES.Esteem	ES.Belonging
General Support								
GS.Appraisal	-----	.70 **	.68 **	.81 **	.87 **	.61 **	.64 **	.71 **
GS.Tangible	-1.98	-----	.57 **	.73 **	.67 **	.80 **	.55 **	.70 **
GS.Esteem	8.35 †	10.04 †	-----	.69 **	.61 **	.52 **	.86 **	.63 **
GS.Belonging	3.98 †	5.88 †	-5.39 †	-----	.74 **	.65 **	.67 **	.85 **
Ethnic Support								
ES.Appraisal	1.48	-----	-----	-----	-----	.71 **	.66 **	.80 **
ES.Tangible	-----	4.60 †	-----	-----	0.55	-----	.58 **	.76 **
ES.Esteem	-----	-----	0.02	-----	6.62 †	5.99 †	-----	.70 **
ES.Belonging	-----	-----	-----	2.22	4.23 †	3.41 †	-3.52 †	-----

Note. GS = general support; ES = ethnic support. Correlations are represented in the top of the table and results of paired samples t-tests are represented in the bottom of the table.

* Correlation significant at $p < .05$

** Correlation significant at $p < .01$

† t-test significant at $p < .003$

Qualitative Results

Content analysis. A series of open-ended qualitative questions were included in the study in order to better understand the impact of participants' ethnic group on functioning following their relationship loss. Participants were asked to respond to the following questions:

- 1) How did members of your ethnic group react after you experienced the relationship loss?
- 2) In what ways did your ethnic group help you to cope and recover from the relationship loss?
- 3) In what ways did your ethnic group make it more difficult for you to cope and recover after your relationship loss?

The responses to these questions were analyzed thematically in order to identify themes and patterns across the responses. Content analysis is a form of qualitative analysis that organizes the data according to themes and patterns. These themes can be derived using inductive or deductive approaches. For the present study, themes were derived based on the data (inductive) and organized based on theories of social support, unsupportive social interactions, and coping behavior (deductive). Braun and Clarke's (2006) six phase method of identifying themes within qualitative data was used to guide the present study. In Phase 1, the researcher became familiar with the data for one question and potential codes were noted and defined. In Phase 2, the data were coded systematically using a qualitative data analysis program (Dedoose, Version 5.0.11). Coding was based on the initial codes from Phase 1, with alterations to those codes as well as the addition of new codes when appropriate. Revisions were made to initial

extract coding to reflect changes in the coding structure. Phase 3 involved organizing the codes for each question into possible themes based on the data as well as theory. Themes were identified based on their importance rather than their frequency within the responses. Importance was defined as the theme being included within the response. These themes were reviewed in Phase 4 to ensure that they fit with the coded material and the larger study, and defined within Phase 5. A second coder familiar with qualitative analysis and relevant theories was used to enhance the trustworthiness of the themes. This coder coded 40 randomly selected responses from each of the open-ended questions and coded them based on the coding system. Intercoder reliability was calculated using Cohen's kappa in order to give a measure of trustworthiness of the coding method. The inter-coder reliability was initially found to be fair to moderate across the three questions, with Cohen's kappa at 0.78, 0.65, and 0.75 for the three questions separately. When discrepancies in coding arose, the responses were discussed to reach a consensus. All coding was then reviewed to incorporate this feedback. Finally, response frequency was noted in Phase 6 to quantitatively compare themes. These procedures were repeated for each qualitative question. As shown Table 11, Table 12, and Table 13, frequency is represented by the number of participant responses with a given code. Percentages were then calculated from these frequencies representing the percentage of participants who completed the question with a given code. Many responses included multiple sentences or ideas which were coded as one response but could be coded under multiple themes. Therefore, the sum of the frequencies of the codes may exceed the frequencies for the overarching themes, and the sum of percentages for each questions are greater than 100%. The majority of participants responded in some way to the open-ended questions. Of the

183 participants included in the quantitative analysis, 181 responded to the Reaction Question, 180 responded to the Help Question, and 178 responded to the Hinder Question.

Qualitative themes.

Ethnic group reaction. Specific themes, including the frequency and proportion of themes among responses, can be found in Table 11. When asked about how members of their ethnic group reacted to their loss, most participants noted the emotional reactions of those around them. Most common were *Sadness*, caring and compassion toward the individual (*Empathy, Love, Caring*), *Surprise*, and being *Upset*. Some respondents noted that those around them expected the loss to occur, often when it was a relationship breakdown (*Lack of Surprise*). For example, one participant wrote: “My friends seemed to expect the end of the relationship, they were only surprised it didn't end sooner” (Male; Caucasian; Age 27). Some noted that others were happy or relieved about the loss (*Joy*). *Worry* and *Anger* were also evident among the responses.

Respondents also frequently made comments about the support they received. Many of these comments were nonspecific and involved wording such as “They were supportive of me” (Female; Caucasian; Age 20). Others made mention of members of their ethnic group allowing them to speak about and work through the loss (*Appraisal*), providing *Emotional Support*, doing them favours and actively assisting them (*Tangible*), and being there for one another through a mutual loss (*Mutual Support*). As one woman stated, “We grew closer, grieved together and supported each other” (Female; Caucasian; Age 19). Less commonly individuals reported experiencing support through companionship (*Belonging*) and increased *Esteem*. Some respondents reported a clear

Table 11

Content Analysis of Responses to the Question "How did members of your ethnic group react after you experienced the relationship loss?" Number of Responses, Responses by Ethnic Group, and Response Percentages (N = 181).

Themes	Codes	# of Responses						Description
		Total	CA	AS	AR	Other	Other	
Emotional Reactions		94 (51.93%)	73	9	6	6	6	
	Anger	9 (4.97%)	6	1	----	2	2	Frustration, resentment, hostility
	Empathy, Love, Caring	21 (11.60%)	20	1	----	----	----	Caring, compassion, sympathy, sentimentality toward the individual
	Joy	8 (4.42%)	6	----	1	1	1	Relief, happiness, optimism
	Lack of Surprise	9 (4.97%)	6	3	----	----	----	Expression that they were expecting the loss
	Sadness	33 (18.23%)	24	3	3	3	3	Hurt, guilt, regret
	Surprise	21 (11.60%)	14	2	4	1	1	Shock, disbelief
	Upset	14 (7.73%)	14	----	----	----	----	General upset, bothered
	Worry	3 (1.66%)	2	----	----	1	1	Concern, anxiety, distress, fear
	<i>Con't</i>							

Support	89 (49.17%)	76	7	4	2
General	49 (27.07%)	47	1	----	1
Appraisal	22 (12.15%)	18	2	1	1
Belonging	6 (3.31%)	5	----	----	1
Emotional Support	21 (11.60%)	18	2	1	----
Esteem	2 (1.10%)	2	----	----	----
Intrusive	2 (1.10%)	1	----	1	----
Lack of Support	11 (6.08%)	7	4	----	----
Mutual Support	8 (4.42%)	7	----	1	----
Tangible	9 (4.97%)	7	1	----	1
Standard	7 (3.87%)	5	2	----	----
General	4 (2.21%)	3	1	----	----
Practices	3 (1.66%)	2	1	----	----

Con't

Physical and Behavioural Reactions	3 (1.66%)	1	1	----	1	1	Includes sleep problems, physical pain, etc.
General	3 (1.66%)	1	1	----	1	1	
No Reaction	27 (14.92%)	15	3	2	7	7	Members of their ethnic group did not react in any particular way to the loss
General	13 (7.18%)	9	----	----	4	4	No additional details given
Minimal or No Contact with Others	14 (7.73%)	6	3	2	3	3	No reaction because others did not know about the loss, relationship, and/or individual's emotional reactions

Note. CA represents Caucasian participants ($n = 138$); AS represents Asian participants ($n = 16$); AR represents Arab participants ($n = 12$); 'Other' represents participants from other ethnic groups ($n = 15$).

Lack of Support from those around them or having support given when it was unwanted (*Intrusive*).

Some respondents noted that those around them had physical reactions to the loss, including sleep problems and physical pain (*Physical and Behavioural Reactions*). Others commented on how those around them acted in a standard way based on their expectations of them (*Standard – General*) or cultural and religious practices (*Practices*). A portion of respondents stated that those around them did not react in any particular way as a result of the loss. Half of these respondents gave no further details (*No Reaction – General*), but the other half indicated that they did not tell many people of their ethnic group about the loss and/or the relationship itself (*Minimal or No Contact with Others*). As one participant indicated, “They did not react in any particular way, I kept my relationship feelings fairly private for the most part, and was given minimal coping advice” (Female; Caucasian; Age 20).

Results suggested that respondents were most aware of the functional and emotional responses that those of their ethnic group had to their loss. A portion of respondents commented on both of these themes, for example “Everyone in my family was very upset but also supportive when my grandfather passed away” (Female; Caucasian; Age 21). This combination of themes suggests that a strong emotional reaction that is similar to the reaction of the individual who experienced the loss can be related to gaining support from that individual. One trend that emerged was that when a relationship loss occurred within a friendship or romantic relationship that one’s ethnic group did not approve of, individuals commonly noted themes of a *Lack of Support*, and *Joy* surrounding the loss. These themes are evident in the following excerpt: “My family

was not surprised, and were relieved because they never liked my boyfriend” (Female; Caucasian; Age 20). Conversely, some reported *No Reaction* because the individual knew that their ethnic group would not approve if they knew about the relationship: “They did not know, they do not approve of dating” (Female; South Asian; Age 19).

Codes were reviewed by ethnic group in order to note any trends in responses that were overshadowed by the high proportion of Caucasian respondents ($n = 138$). When divided into four ethnic groups as described previously within the quantitative results (i.e., Caucasian, Asian, Arab, and ‘other’), a very high proportion of individuals within the ‘other’ group noted that members of their ethnic group had *No Reaction* to their relationship loss (7 out of 15 respondents) and of those, three indicated it was because members of their ethnic group were unaware of the relationship loss (*Minimal or No Contact with Others*). Others within the ethnic group not knowing about the loss was seen in much higher proportions within the minority groups (noted by 3 of 16 Asian participants, 2 of 12 Arab participants, and 3 of 15 ‘other’ participants) than within the Caucasian participants (6 of 138 participants). One possible reason for this is that some members of ethnic minorities may not have many individuals within their social network that share their ethnic background. For example, one individual stated that “They didn’t know about it because I don’t tell my family and I don’t have close friends of the same ethnic group” (Female; Chaldean; Age 22). Another reason for this lack of disclosure is that certain relationships may not be approved by all ethnic groups, for example dating relationships are often prohibited by Muslim Arabs. Therefore the nature of the relationship loss may interact with ethnicity and cultural beliefs to impact perceptions of social support.

Of those that did report a reaction among their ethnic group members, all groups noted multiple emotional reactions. *Sadness* and *Surprise* were proportionally high among all groups, but a *Lack of Surprise* was particularly evident within responses from Asian participants (3 out of 16 responses). As one participant noted, “Apparently they saw it coming and didn't warn me; they reacted as if nothing happened, told me I should've seen it coming” (Female; East Asian; Age 20). Different forms of support were also reported across ethnic groups. A high proportion of Asian participants noted that members of their ethnic group showed a distinct *Lack of Support* (25% of Asian respondents), one indicating that members of her ethnic group stated “It was my fault for trusting him” (Female; South Asian; Age 21). Therefore, while themes of emotional reactions and support were noted across groups, it appears that within these initial comments on how others reacted, a higher proportion of ethnic minority members indicated that individuals within their ethnic group reacted in ways that were incongruent with or unsupportive of their own reactions. This was explored further in responses to specific questions about how members of one’s ethnic group helped or hindered postloss recovery and functioning.

Help from ethnic group. Specific themes, including the frequency and proportion of themes among responses, can be found in Table 12. Though a small portion indicated that members of their ethnic group *Did Not Help* them cope and recover following their loss, the large majority of respondents were able to identify at least one way that those within their ethnic group helped them. Similar to the previous question, many individuals were fairly nonspecific about the type of support they received, stating that members of their ethnic group helped by “Being supportive” (Female; Caucasian; Age 20) or “They

Table 12

Content Analysis of Responses to the Question "In what ways did your ethnic group help you to cope and recover from the relationship loss?" Number of Responses, Responses by Ethnic Group, and Response Percentages (N = 180).

Themes	Codes	# of Responses					Description
		Total	CA	AS	AR	Other	
General Support		38 (21.11%)	32	3	2	1	
	"Supportive"	28 (15.56%)	24	2	1	1	Described as supportive without additional details
	"There For Me"	13 (7.22%)	10	2	1	----	Described as present without additional details
Appraisal (Communication)		110 (61.11%)	93	8	5	4	Help related to increased or decreased communication, changing how the individual thinks about the loss
	Advice Giving	14 (7.78%)	11	3	----	----	Others provided advice about coping, recovery, and loss in general
	Decreased Communication	1 (0.56%)	----	----	----	1	Others refrained from talking about the event
	Encourage to Move Forward	14 (7.78%)	12	----	1	1	Others encouraged the individual to move forward
	Focus on Positive	18 (10.00%)	16	2	----	----	Others brought the focus to the positive aspects of the loss (i.e., they are no longer in pain)

Con't

Kind Words	10 (5.56%)	9	----	1	----	Others provided compliments and condolences
Speak from Own Experience	9 (5.00%)	4	2	1	2	Others spoke about their own experiences of loss
Talk About Loss	60 (33.33%)	53	4	2	1	Allowed individual to speak about the loss, including working through the event
Togetherness	76 (42.22%)	64	3	5	4	Help related to being closer or more removed from others
Cut Out of Life	1 (0.56%)	----	----	----	1	Assisted coping by removing themselves from the individual's life
Distraction	40 (22.22%)	38	2	----	----	Others provided distractions to take the individual's mind off the loss, including talking about other things and engaging in leisure activities
Giving Space	3 (1.67%)	3	----	----	----	Assisted coping by allowing the individual to be alone
Grieving Together, Mutual Support	21 (11.67%)	17	----	3	1	The loss was experienced by others within the ethnic group, therefore they provided each other with mutual support and/or they grieved together
Spend Time Together Regularly	23 (12.78%)	18	1	2	2	Others provided support by checking in regularly, spending time with the individual, and physically being with them
Emotional Support	37 (20.56%)	30	4	3	----	Provided emotional support
General	13 (7.22%)	9	3	1	----	Described being able to express emotions about situation

Con't

Accept, Respect, Understanding	7 (3.89%)	6	1	----	1	----	Described others being accepting, respectful, and understanding of their emotional reaction
Caring and Comfort	20 (11.11%)	18	1	1	1	----	Provided with caring and comfort from others, including efforts to improve mood
Tangible Support	22 (12.22%)	21	1	1	----	----	
General	22 (12.22%)	21	1	1	----	----	Instrumental support, actively helping with favours and other actions
Spiritual/ Religious	5 (2.78%)	----	1	4	4	----	
General	5 (2.78%)	----	1	4	4	----	Spiritual or religious practices assisted in coping
Did Not Help	25 (13.89%)	11	3	3	3	8	
General	25 (13.89%)	11	3	3	3	8	Ethnic group did not help the coping process

Note. CA represents Caucasian participants ($n = 137$); AS represents Asian participants ($n = 16$); AR represents Arab participants ($n = 12$); 'Other' represents participants from other ethnic groups ($n = 15$).

told me they were always there for me” (Male; South Asian; Age 18). The most commonly described form of help from ethnic group members was related to changing their *Appraisal* of the event, often using communication. A large portion noted that others allowed them to speak about their loss and helped them work through the event (*Talk About Loss*). As one individual stated, “I always had someone to talk to, but most importantly people just let me talk without trying to give me advices [*sic*] as to what I should do” (Female; Caucasian; Age 26). Helpful communication also came in the form of others bringing their focus to the positive aspects of the situation (*Focus on Positive*), exemplified by one woman who stated “They encouraged me to realize it was the best thing so my father was no longer in pain” (Female; Caucasian; Age 43). Ethnic group members encouraged respondents to move forward (*Encourage to Move Forward*), gave them advice on how to cope and deal with the situation (*Advice Giving*), *Spoke from Own Experiences* of loss, and offered condolences and other *Kind Words*. Sometimes a combination of these aids was most beneficial, as with this participant: “My ethnic group supported me by listening to me and giving me a lot of advice” (Female; Caucasian; Age 18). One individual noted that their ethnic group helped them by not talking about the event (*Decreased Communication*), stating that following the loss her “family never talked about it again” (Female; Aboriginal; Age 20), but most appreciated the increased communication.

Being together with others and elements of *Togetherness* were also common among responses. *Distraction* was a prominent way in which members of the individuals’ ethnic groups spent time with them and assisted in their coping following loss. This often included engaging individuals in different activities and taking their minds off the loss.

As one participant wrote, “They were there to distract me with happy and fun things and helped me take my mind off of the break up” (Female; Caucasian; Age 27). Other helpful strategies related to being together with others included increased contact with others on a regular basis (*Spend Time Together Regularly*) as in following case: “They were there at all times and we were able to grieve together” (Female; Caucasian; Age 18). Specific forms of togetherness included *Grieving Together* following the loss, providing *Mutual Support*, and having others regularly check in and spend time with them. Some individuals appreciated that they were *Given Space* or were *Cut Out of the Lives* of those in their ethnic group and found that this was more helpful to them. One participant stated, “They gave me space when I needed it and never judged me for what I was feeling” (Female; Caucasian; Age 20). Responses were also consistent with definitions of *Emotional Support* and *Tangible Support*. Within the response set, *Emotional Support* included descriptions of ethnic group members giving the opportunity to express and communicate emotions surrounding the loss (*General*), providing *Caring and Comfort*, and showing *Acceptance, Respect, and Understanding* toward the individual. This could be individual or mutual emotional support as exhibited in the following excerpt, “we shared our feelings with each other to help get over the loss” (Female; Caucasian; Age 18). *Tangible Support* included such instrumental support as offering money, accommodations, food, and other favours that greatly eased the stress of the individual who experienced the loss. Finally, a small portion of individuals, primarily identifying as Arab, mentioned specific spiritual, cultural, or religious practices (*Spiritual/Religious*) that those within their ethnic group engaged in that helped them cope following their loss. The following participant who identified as Arab and Muslim wrote that “there was a

public reading of the Quran at the mosque before the burial in honor of the deceased (as is custom)” (Female; Arab; Age 21).

Though overall a small proportion of respondents noted that members of their ethnic group *Did Not Help* them cope, this theme was disproportionately high within the ‘other’ group of participants. Eight of the 15 respondents within this group noted that those within their ethnic group did not assist them. Most individuals did not elaborate, but some indicated that members of their ethnic group were unaware of the loss or the individual “kept feelings to myself” (Female; Aboriginal/European; Age 17). The proportion of *Did Not Help* responses within the Asian and Arab participant groups was also higher than that of the majority Caucasian group.

Among those who did indicate that their ethnic group was helpful following their loss, some forms of assistance were fairly consistent across ethnic groups, such as *General Social Support* and *Emotional Support*, whereas others were more impacted by ethnicity. For example, the vast majority of respondents noting *Tangible Support* from their ethnic group were Caucasian, with only one Asian participant indicating that “they tried to talk things out between that close friend of mine (also theirs) and me” (Female; East Asian; Age 20). Members of all groups noted the importance of *Togetherness* in their coping process, but the impact of *Distraction* was evident primarily within the responses of Caucasian participants (38 out of 40 responses). A high proportion of Arab respondents indicated that *Grieving Together* with others helped them to cope (three responses), as did just *Spending Time Together* (two responses). These responses also tended to have a religious quality to them, as one respondent noted “We would try to

make one another better by saying this is life and we would focus also on religious faith to strengthen our depressed positions from the loss” (Female; Arab; Age 20).

Appraisal Support was also noted by all groups at relatively high rates. For example, half of the Asian participants noted some amount of *Appraisal Support*, most commonly *Talking About the Loss*. Interestingly, no Asian respondents indicated that members of their ethnic group *Encouraged them to Move Forward* from the loss, an expected response based on the high rates of growth following loss among this group within the quantitative results of the present study. This encouragement was noted within the responses of Caucasian, Arab, and ‘other’ participants. One individual noted that her mother “continued to reassure me that it was only that guy that was bad and give me hope of having a positive relationship [*sic*] later in life” (Female; Hispanic; Age 20). Thus, members of most ethnic groups represented commented on how individuals within their ethnic groups helped them to cope and recover following their significant loss.

Hindrances from ethnic group. Specific themes, including the frequency and proportion of themes among responses, can be found in Table 13. The largest proportion of respondents indicated that their ethnic group did not make it more difficult to cope with their loss (*Did Not Hinder*). This proportion was highest among ‘other’ ethnic group respondents (60%), followed by Asian respondents (31%), and Caucasian respondents (28%). Only two individuals among the Arab respondents indicated that those in their ethnic group *Did Not Hinder* their coping. Overall, this indicates a mostly supportive relationship with one’s ethnic group. Yet, it is important to note that a large proportion of respondents within ‘other’ ethnic groups also indicated that members of their ethnic groups *Did Not Help* their recovery following the loss.

Table 13

Content Analysis of Responses to the Question "In what ways did your ethnic group make it more difficult for you to cope and recover after your relationship loss?" Number of Total Responses, Responses by Ethnic Group, and Response Percentages (N = 178).

Themes	Codes	# of Responses					Description
		Total	CA	AS	AR	Other	
Informational and/or Communication Overinvolvement		34 (19.10%)	26	4	2	2	Individuals described too much communication about the loss
	Focus on Negative Aspects of Loss	1 (0.56%)	1	----	----	----	Others spoke too much about the negative aspects of the loss
	Reminders of Loss	15 (8.43%)	11	2	1	1	Coping was hindered due to reminders of the loss, including others speaking about the individual unrelated to the loss event, seeing the individual, or being in situations that reminded of the individual
	Speak From Own Experience	3 (1.69%)	3	----	----	----	Others hindered coping by talking about their own experiences of loss
	Talked About Loss	17 (9.55%)	13	2	1	1	Others engaged in frequent discussion of the loss itself
Bumbling, Inept		28 (15.70%)	27	----	1	----	Described inappropriate behaviours, lack of knowledge that hindered coping
	Attempts to Improve Mood	6 (3.37%)	6	----	----	----	Others tried inappropriately to cheer the individual up following the loss
<i>Con't</i>							

Lack of Caring	2 (1.12%)	2	----	----	----	----	Others indicated they did not care about the individual
Lack of Comfort and Empathy	2 (1.12%)	2	----	----	----	----	Others did not provide comfort or empathy in times of need
Lack of Understanding	15 (8.43%)	14	----	1	----	----	Others did not understand the loss or the individual's reaction to the loss
Unaware How to Help	4 (2.25%)	4	----	----	----	----	Others did not know how they could help the individual following the loss
Smothering	21 (11.80%)	14	3	3	1	1	Described emotional overinvolvement
General	4 (2.25%)	4	----	----	----	----	Described being negatively overwhelmed by support with minimal additional details
No Opportunity to Cope on Own	2 (1.12%)	2	----	----	----	----	Others provided little opportunity for the individual to cope on their own in the ways that they prefer
No Time Alone	6 (3.37%)	5	1	----	----	----	Individuals were not provided with time to be alone
Protect, Control, Belittle	4 (2.25%)	3	1	----	----	----	Others attempted to protect the individual causing disempowerment
Questions	10 (5.62%)	5	1	3	1	1	Others asked excessive questions about the loss, the individual's reaction, or other aspects of their experience
Blaming	21 (11.80%)	14	3	2	2	2	Individuals described a critical reaction from others that hindered coping
Blaming	3 (1.69%)	3	----	1	1	1	Others blamed the individual for the loss and reminded them of the loss in critical ways

Con't

Expressed Frustration, Conflict	4 (2.25%)	4	----	----	----	----	Others expressed frustration about the coping process or engaged in conflict with the individual
Gossip, Judgement	6 (3.37%)	3	2	1	----	----	Others hindered coping by gossiping about the individual and judging them for the loss
Happy for Loss	4 (2.25%)	3	----	----	1	----	Others were happy the loss occurred
Increased Self-Criticism	6 (3.37%)	6	----	----	----	----	Others made comments that made the individual feel bad about themselves
Minimizing	14 (7.87%)	12	1	1	----	----	Others minimized the loss and its impact
Life Goes On	8 (4.49%)	7	----	1	----	----	Others minimized the event by stating that it is part of life, life goes on, the individual should 'get over it'
Loss as Unimportant	6 (3.37%)	5	1	----	----	----	Others ignored the event or did not view it as important
Distancing	13 (7.30%)	10	1	----	2	----	Others increased distance between them and the individual in various ways
Abandoned	3 (1.69%)	3	----	----	----	----	Others removed themselves from the individual's life following the loss
Lack of Connection	2 (1.12%)	2	----	----	----	----	Coping was hindered by a weak connection between the individual and others within their ethnic group
Physical Distance	1 (0.56%)	1	----	----	----	----	Coping was hindered by physical distance between individual and supports
Stopped Communication	7 (3.93%)	4	1	----	2	----	Others stopped the individual from communicating about the loss

Con't

	Stopped Emotional Expression	1 (0.56%)	1 ----	1 ----	1 ----	Others stopped the individual from expressing emotions
Characteristics of Others		11 (6.18%)	10 ----	1 ----	1 ----	Described reactions of others that hindered the individual's coping process
Cultural Traditions	1 (0.56%)	1 ----	1 ----	1 ----	1 ----	Cultural traditions surrounding loss hindered coping
Discomfort with Event	1 (0.56%)	1 ----	1 ----	1 ----	1 ----	Others' discomfort with the circumstances of the event hindered the coping process
Others Mourning, Coping	9 (5.06%)	8 ----	1 ----	1 ----	1 ----	Coping was hindered because other individuals within the ethnic group were also mourning or coping with the loss in their own ways
Actions During Loss Event		4 (2.25%)	3 ----	1 ----	1 ----	Described behaviours during the relationship loss event that hindered coping following the loss
Action or Lack of Action within Situation		2 (1.12%)	2 ----	2 ----	2 ----	Individual expected and/or wanted the other to act in a particular way within the situation and they responded differently
Took Other's Side		2 (1.12%)	1 ----	1 ----	1 ----	Agreed with the other individual within a relationship breakdown
Did Not Hinder		54 (30.30%)	38 ----	5 ----	2 ----	Others within the ethnic group did not hinder the coping process following loss
General		54 (30.30%)	38 ----	5 ----	2 ----	9

Note. CA represents Caucasian participants ($n = 135$); AS represents Asian participants ($n = 16$); AR represents Arab participants

($n = 12$); 'Other' represents participants from other ethnic groups ($n = 15$).

Many respondents would indicate within their responses that members of their ethnic group were generally helpful to them, but were also able to identify areas in which members of their ethnic group did not always react ideally or created some challenges for their recovery. One such area was through *Communication Overinvolvement*, or too much communication related to the event. This could include extensively *Talking About the Loss* when the individual did not want to, having constant *Reminders of the Loss* based on situational factors, having others *Speak from their Own Experiences* of loss, and others *Focusing on the Negative Aspects of the Loss* itself. For example, one individual wrote “They brought it up again after a short time away from it and it brought back memories” (Female; Caucasian; Age 21). Emotional overinvolvement, or *Smothering*, was also noted to be problematic from one’s ethnic group. Codes within this theme included asking excessive *Questions* related to how the individual is feeling, what they think about the loss, and why they believe it occurred; attempts at controlling or protecting the individual so they felt belittled and disempowered (*Protect, Control, Belittle*); and spending excessive amounts of time with the individual so that they had *No Opportunities to Cope on their Own* or simply had *No Alone Time* to process the recent events. With many of these strategies, there is a sense that ethnic group members were trying to help, but ‘missed the mark’ on how best to do that. This is evident in the following response: “The only time my ethnic group made it more difficult for me to cope and recover is when they tried to [*sic*] hard and they treated me like I couldn’t handle a certain situation at certain times. They didn’t do all this all time but when they did it was hard for me because I felt like they didn’t think I could get through it or handle it because of my situation” (Female; Caucasian; Age 19).

Many respondents noted that those around them just did not know what to do and did not understand how they were feeling, which greatly impacted their ability to cope. This *Bumbling, Inept* behaviour in assisting coping could come across in many forms. Most common was that individuals had a sense that those around them had a *Lack of Understanding* in terms of the loss itself, their reactions to the loss, or the relationship they had prior to the loss. This could cause significant self-doubt, as in the following excerpt: “didn't understand why I was so upset and made me question myself and my own feelings (i.e. should I be this upset, is there something wrong with me?)” (Female; Caucasian; Age 21). Even when a level of understanding was there, some noted that others were simply *Unaware How to Help* the individual cope. When this was taken to the extreme, some inappropriately attempted to cheer the individual up (*Attempts to Improve Mood*), resulting in them feeling worse. A small portion of respondents indicated that those around them showed a distinct *Lack of Caring* or *Lack of Comfort and Empathy* which hindered the coping process for them.

Less commonly, individuals indicated that members of their ethnic group actively engaged in activities that were the opposite of traditional supportive behaviour. Some individuals noted incidences when they were blamed for the loss (*Blaming*), they experienced *Judgement* because of loss, others *Gossiped* about them, they saw others experience joy because of their loss (*Happy for Loss*), comments were made that made them feel bad about themselves (*Increased Self-Criticism*), and there was increased *Frustration and Conflict* within their surviving relationships. More subtly, respondents noted that members of their ethnic group would *Minimize* their loss by saying that *Life Goes On* or acting as though the *Loss was Unimportant* or did not happen. One individual

noted both of these elements within members of her ethnic group, stating “They acted as if nothing happened, almost told me to blame myself for digging my own grave” (Female; East Asian, Age 20). Others found that members of their ethnic group *Distanced* themselves from them in their time of need. They did this both physically (increasing *Physical Distance*, *Abandoning*) and emotionally (feeling a *Lack of Connection*, actively *Stopped Communication* and *Stopped Emotional Expression*).

Though previously individuals indicated that providing *Mutual Support* and *Grieving Together* had been beneficial for them, others indicated that this caused problems for their coping process in that they could not focus on themselves. Some indicated that others took longer to cope than they did which made them uncomfortable (*Others Mourning*, *Coping*). As one individual noted about members of their ethnic group, “They were also very emotional over the situation so it was hard to pull myself together when they were falling apart as well” (Female; Arab; Age 19). Others’ *Discomfort with the Event* or circumstances of the loss and specific *Cultural Traditions* also hindered individuals from coping in the way they wanted. One individual stated that her recovery was hindered by the fact that “Our culture requires you to wear black for a minimum of a week and not listen to any music or watch television for three days after the death” (Female; Caucasian; Age 21). A small portion of respondents commented on how members of their ethnic group acted within the loss itself (*Actions During Loss Event*), often when it was a relationship breakdown. For example, when members of their ethnic group *Took Another’s Side* or did not act as they wanted them to during the conflict (*Action or Lack of Action Within Situation*) it made it more difficult for them to overcome the loss.

When divided by ethnic group, few trends emerged from the minority groups as many of the respondents within these groups indicated that members of their ethnic group *Did Not Hinder* their coping. Individuals across groups did indicate that an *Informational Overinvolvement* and too much communication about the loss hindered their coping. Having members of one's ethnic group be *Bumbling or Inept* at helping the individual cope was seen primarily within the Caucasian group, with only one Arab respondent indicating that they felt a *Lack of Understanding* from members of their ethnic group. Codes related to *Minimizing*, the *Characteristics of Others*, and *Actions During the Loss* were also identified by a maximum of one member of an ethnic minority. One quarter of Arab respondents noted that their coping was hindered because they were asked too many *Questions* following the loss. Other forms of *Smothering* were evident to a lesser degree across ethnic groups.

Directly *Blaming* the individual for the loss was only indicated within the Asian, Arab, and 'other' groups, as one individual stated "My father always used to stick it in my face if a relationship [*sic*] went sour" (Female; Hispanic, Age 20). Other forms of *Blaming* were reported by all ethnic groups. One response incorporates many of these themes when the individual stated "They bring up the loss quite a bit, even still now, and question why it happened or why I contributed to its happening" (Female; Arab; Age 21). Responses within the *Distancing* theme were most commonly contributed by Caucasian participants, though having members of one's ethnic group *Stop Communication* about the event was reported by one Asian participant and two individuals within the 'other' group. For example, one aboriginal woman indicated that "Not talking about it made it more difficult" (Female; Aboriginal; Age 20).

It should be noted that many of the hindrances to coping noted by respondents were fairly similar in content to themes identified in the coping aids. In many areas it appeared to be the extent to which the strategy was used that impacted how it was viewed by the individual. Moreover, the fit between how members of the ethnic group behaved and the expectations or needs of the individual likely impacted whether increased communication, for example, was viewed as a help or a hindrance.

Overall trends. Across all three questions, responses from all respondents reflected a general discussion of the social supports they received. Though they were asked to comment on support from their ethnic group, responses did not differ in their quality based on ethnicity of the respondents. For example, very few supports that are unique practices of any given group were reported. When these were reported, they were often more connected to religious practices than cultural practices, such as public readings of the Quran. Respondents from various ethnic groups commented on how they gained support from members of their ethnic group that were both family and friends, but few specifically indicated support from other community members or community leaders. Moreover, a comparison was not directly made among the responses between support received from ethnic community members and friends or supports outside of that community. In one instance, an individual did comment on how she identified as Aboriginal, but was adopted by a Caucasian family. She noted very distinct differences in the reactions of her adopted and biological families in relation to her loss, but neither was overly supportive. As a whole, it is challenging to say whether the supports and hindrances discussed are unique to ethnic group members or can be applied widely to all social supports.

CHAPTER V

Discussion

The present study aimed to explore an important variable in ethnically diverse populations within the context of trauma and posttraumatic growth. The role of ethnic identity commitment and ethnic identity exploration in promoting positive and negative outcomes following a significant relationship loss was examined. Further, relations with general and ethnic group specific social support were tested. The following discussion begins with a summary of the research findings described above. A more comprehensive review of these results within the broader posttraumatic growth (PTG), social support, and ethnic identity theory follows. Strengths and weaknesses of the present research are reviewed with suggestions for future research. Finally, implications of the study results are outlined.

Initial Data Review

Participants within the current study experienced a range of relationship loss experiences. Most notable were those losses related to relationship breakdown and death of a loved one. On average the participants experienced relatively high stress at the time of the event, which can lead to a disruption in way of life, and subsequently foster growth and change. PTG reports within the present study were lower than in initial validation studies of the Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996), but are consistent with later reports of PTG among mixed samples (Taku, Cann, Calhoun, & Tedeschi, 2008). It is possible that the relations between the predictor variables and PTG in the current study were somewhat tempered by these moderate PTG scores, though this does not affect the validity of results. Some researchers have speculated that reports of

growth following trauma are influenced greatly by social desirability and can be inflated by an overly positive response style. Within the present study, PTG was found to be unrelated to social desirability measures lending further evidence to the validity of reported growth. The average Posttraumatic Stress Disorder (PTSD) scores within the present sample (40.83) were below the cut-off of 44 for PTSD reported by Blanchard and colleagues (1996) for non-military populations, but approximately 44% of participants did reach or exceed this cut-off. These reports of PTSD symptomology are to be expected based on the student sample included in the study and the reported stressful life events.

Participants in the present study tended to score lower on both ethnic identity commitment and exploration than previous diverse samples (Yoon, 2011; Arbona & Jimenez, 2014). Brown and colleagues (2014) tested the measurement invariance of the revised Multigroup Ethnic Identity Measure across different racial and ethnic groups and found pronounced differences in the degree to which individuals from different groups reported ethnic identity commitment and ethnic identity exploration. The reported ethnic identity commitment and ethnic identity exploration within the present study is most similar to the means of the Caucasian samples within Brown et al.'s study (2014). These lower mean scores for ethnic identity exploration and commitment could be expected based on the proportion of Caucasian participants within the study. Further implications of the ethnic makeup of the sample are discussed below.

Review of Results

The first goal of the present study was to identify the relation between ethnic identity and trauma outcomes. It was hypothesized that ethnic identity commitment and ethnic identity exploration would be positively related to PTG, but negatively related to

PTSD symptoms and that these variables would be able to predict scores in the outcome measures over and above the influence of covariates. Initial results indicated that this hypothesis was supported for PTG. Upon further analysis, the minimal influence of ethnic identity commitment on PTG was better accounted for by covariates, including ethnicity and loss type. Ethnic identity exploration was found to be a significant predictor of PTG even when controlling for covariates. Specifically, more exploration of ethnic identity and culture was related to increases in PTG following loss. The hypothesized relations between ethnic identity and PTSD symptoms were not found, and in fact ethnic identity exploration was positively correlated with symptoms. The predictive power of ethnic identity exploration was reduced to nonsignificance when covariates were accounted for. When group differences were reviewed, Asian participants experienced significantly more growth following loss than other groups. Group differences based on ethnicity were not found for PTSD symptoms. These results run contrary to previous literature which indicated that commitment to a group identity is predictive of positive outcomes (Kiang & Fuligni, 2010), and that this influence is greater than the influence of group differences based on the group that one identifies with (Taku & Cann, 2014). These results are discussed further below.

The second goal of the present research was to identify the specific role of social support from one's ethnic community in the growth process. Quantitative results showed that both social support from one's ethnic community and general social network were positively related to PTG and negatively related to PTSD symptoms. When a more detailed and comparative analysis was performed only general social support and ethnicity significantly predicted PTG. These results did not support the hypothesis for

this research question. Therefore, the hypothesis that social support from one's ethnic group will have greater relative importance in the prediction of growth following loss as compared to general social support was not found to be true within the present study.

A mediation analysis was used to further explore the relation between the different forms social support, ethnic identity, and PTG. Within this analysis, social support from one's ethnic group was found to partially mediate the relation between commitment to one's ethnic identity and growth following loss. This mediated relation was evident even when controlling for ethnicity and other covariates. Therefore, having a stronger commitment to one's ethnic community can increase growth in direct and indirect ways. This identity commitment can also lead to greater support from one's ethnic community, which in turn is related to greater growth following loss. This partially supports the initial hypothesis that social support from one's ethnic group will mediate the effect of commitment to one's ethnic identity on growth following loss.

The third research question asked generally how one's ethnic group contributed to functioning following loss. Qualitatively, respondents indicated that they received a great deal of social support from members of their ethnic community, though they did not compare the support received from this specific group to the overall support they received from their general social network. Additionally, it was not clear based on the responses exactly who many of the respondents were referring to within their comments, such as whether friends, family, or community leaders provided the support indicated. Respondents noted that those in their ethnic group responded with mixed emotions to their loss. Whereas some shared the shock, sadness, and pain that they felt at the time of the loss, others expressed happiness at the relationship breakdown. Often reactions that

were incongruent with the respondents' reactions were from members of their ethnic community who did not approve of or support the relationship that was lost. Members of the ethnic community were also reported to react with specific forms of social support that were similar to those described in the quantitative results. Specifically, respondents noted social supports which are consistent with Cohen and colleagues' (1983) categorization of social support, including tangible, appraisal, belonging and esteem supports. When reviewing these qualitative reports together with the quantitative results, the rank order of the forms of support was the same across methodologies, based on frequency of reports within participant responses (qualitative) and mean of social support subscales (quantitative). Specifically, the form of support with the highest frequency among responses as well as the highest mean score was appraisal support, followed by tangible support, belonging, and esteem. Within the quantitative results, minimal difference was seen between reports of appraisal support and tangible support. This trend was not replicated within the qualitative results, as more than twice the number of respondents reported some amount of appraisal support as tangible support.

Similar trends in social support were seen when respondents were specifically asked how members of their ethnic group *helped* them to cope following their loss. Though quantitative results showed that social support from one's general social network was a more important predictor of growth following loss, qualitatively over 85% of respondents indicated at least one way in which members of their ethnic group aided them in coping with their loss. Many of the respondents could identify more than one form of support within their experience. As compared to the previous question, responses here were more detailed regarding the forms of support provided. As such, categorization

of social support was also more specific. Among these responses, appraisal support primarily through communication could be differentiated more clearly from emotional support. The majority of respondents reported that communication was beneficial to them. Being together with others also emerged as a separate category of support specific to coping with a stressful event. Distraction was an important subcategory within this theme of togetherness and in itself can incorporate elements of many forms of social support by tangibly offering the individual a distraction activity, being together with them, offering acceptance of their current state, and increasing their self-esteem through social interaction.

When asked to comment on what members of their ethnic community did to hinder their coping following trauma, respondents did not simply report the opposite of what had helped them. For example, some individuals cited increased communication as both a help and a hindrance when coping with their relationship loss. Specific studies related to unsupportive social interactions are less prominent within the literature than studies on social supports, but these relations can have a larger impact on functioning than supportive interactions (Lepore, 2001). Respondents in the present study noted a wider range of hindrances than supportive behaviours from their ethnic group. These interactions were fairly similar to those identified within the literature. For example, Ingram and colleagues (2001) included distancing (behavioural and emotional), bumbling, minimizing, and blaming as broad categories within their Unsupportive Social Interaction Inventory. Other researchers have included areas such as emotional overinvolvement/smothering (Coyne & DeLongis, 1986) and unwanted advice and intrusion (Newsom, Rook, Nishishiba, Sorkin, & Mahan, 2005). These categories were

used as the general basis and context in which to interpret the qualitative responses within the present study. It was also evident when reviewing responses that an appropriate fit between the behaviours of others, the individual's expectations and needs, and the nature of the loss event likely impacted perceptions of support. This finding is supportive of goodness-of-fit research within social support literature (Ingram et al., 2001) and the greater importance of perceived social support than objective supports (Haber et al., 2007). In this way, the qualitative results within the present study supported general theories of supportive and unsupportive social interactions, while also highlighting the unique impact of interactions with members of one's ethnic group based on their own reaction, the nature of the relationship loss, and the individual's coping style.

General trends were examined for the different ethnic groups within the study. Higher proportions of individuals from minority ethnic groups noted that others were unaware of their loss, did not help them, and did not hinder their recovery as compared to Caucasian participants. Of those that did identify helpful behaviours, similar themes were seen within the groups, such as offering appraisal support, emotional support, and simply being together. Among the Arab respondents, grieving together was particularly important and also included religious practices and traditions related to grieving. Coping hindrances were also similar across groups, though members of minority groups indicated that they received direct blame for their relationship breakdown at a higher rate than Caucasian participants. In spite of these trends, few participants noted supports that were unique to their ethnic group. The majority of responses were fairly general and could have been reflective of support from within one's ethnic group or from one's general support network. Therefore it was difficult to discern within the responses what forms of

support, if any, were related directly to one's ethnic group and not one's general social network.

Results in Context

The results of the present study are mixed. In some instances hypotheses were supported, whereas in others they were not. Overall, the research findings provide varying levels of support for Calhoun and Tedeschi's (2006) culturally sensitive model of PTG. Within this model, after a stressful or traumatic event occurs, there is a disruption in the way an individual views the world around them causing high distress. Through rumination and cognitively processing the event with those around them, an individual can begin to incorporate the stressful life event into their worldview. Within the present sample, the degree of distress following the relationship loss trauma, both in the form of stress at the time of the event and current PTSD symptomology, was unrelated to PTG. This goes against previous research in the area which shows a positive correlation between distress and growth (Cieslak et al., 2009; Hall et al., 2009). Increased research appears to show that the relation between PTG and PTSD is better represented by a curvilinear relation in that PTG is optimized at moderate levels of distress (Shakespeare-Finch & Lurie-Beck, 2014), but this curvilinear relation between variables was not present within the current study. Contrary to previous findings, the low levels of PTSD symptoms reported within the present study were not a necessary component of participants' growth process following their losses.

Though relationship loss and breakdown have been found to produce symptoms of PTSD and can promote growth (Calhoun, et al., 2010), often losses do not have the same disruptive power as other traumatic events, particularly the types of loss and

breakdowns discussed by the participants of this study. The traumatic nature of an event is amplified when the event is sudden, and the consequences of the event are long-lasting and irreversible (Tedeschi & Calhoun, 1995). Though the suddenness of events can influence the impact of a loss, this variable was not found to significantly relate to outcomes in the present study. Additionally, the fact that many individuals within the present study reported relationship breakdowns that may have occurred over time and are not completely irreversible could have impacted results. This was evident in the fact that group differences emerged in PTG scores within the present sample based on the type of relationship loss identified, and these differences were therefore controlled for within the analyses. No such differences were found for PTSD symptomology based on the relationship loss reported. Therefore the types of events and losses within the present study may have a slightly different quality than other traumatic events and may encourage a different path to growth than other traumas.

Quantitative and qualitative results within the present study did support the cognitive processing aspect of the Calhoun and Tedeschi's (2006) model. Respondents indicated that many forms of social support allowed them to cope and recover following their relationship loss. Though distraction and simply being with others can be an important part of overcoming such events (Scrignaro, Barni, & Magrin, 2011; Duran, 2013), it is the process of making sense of the event and working through by communicating with others that was most commonly cited by respondents as helping them. According to the PTG model, information is needed from trusted others to expand one's worldview and incorporate the loss and the meaning that the loss holds for the individual and their surrounding community. In addition to providing a safe space to

speak about loss-related concerns, social support assists the individual by providing socially accepted coping strategies and schemas through which to understand the loss that occurred (Tedeschi & Calhoun, 2004).

Reports of socially supportive behaviours within the present study supported theories of social support, though they did not differentially support one model of support over the other. Quantitative reports of perceived social support that were not specifically anchored within the relationship loss event were positively related to PTG and negatively related to PTSD. Therefore, it can be said that social support had an overall impact on functioning, supportive of the main effect model of social support (Cohen, et al., 2000). Through qualitative comments, respondents were also able to identify how members of their ethnic groups provided support in the face of crisis and loss, representative of the stress-buffering model of social support (Cohen & Wills, 1985). In both quantitative and qualitative results, connecting with others through feelings of group belonging were found to be important elements of the support received. Therefore, it appears that all forms of social support have a positive impact on functioning within individuals' daily lives as well as in times of crisis and stress.

The findings of the present study are also supportive of Lepore's Social-Cognitive Processing Model (2001) which posits that recovery from traumatic and stressful life events depends partly on working through thoughts and emotions related to the trauma with one's social network. When all efforts to connect with others and process distressing events are met with unsupportive interactions, the process of recovery may be diminished. Lepore (2001) identifies social constraints within any situation in which a trauma survivor attempts to express their trauma-related concerns to others, but instead of

support they feel misunderstood or are alienated from those around them. Research has shown that more social constraints are related to higher incidence of PTSD symptomology, depressive symptoms, and overall psychological distress (Belsher, Ruzek, Bongar, & Cardova, 2012). These findings are also in line with the caveats that Tedeschi and Calhoun noted in relation to social support (2004). Examples of these were particularly evident in the qualitative responses of participants. Tedeschi and Calhoun (2004) outlined that the quality of social supports was important within the growth process and that supportive behaviours should focus on encouraging communication and processing. Some individuals within the present study noted that though they were surrounded by those in their social network and they were offered advice, they were discouraged from open communication about the event or others were not supportive of the relationship in the first place. Moreover, based on the nature of the relationship loss, important supports may have been lost during the event leaving some respondents feeling rejected and isolated. Therefore, respondents were aware that the degree of self-disclosure within their relationships and the stability of the relationships themselves affected their ability to cope following loss.

Newer developments of the PTG model indicate that sociocultural elements have a very strong influence on the growth process. Calhoun and Tedeschi (2006) propose that cultural influences dictate norms surrounding reactions to stress, coping strategies, and the understanding of negative events. These are transmitted through idioms related to stressful life events (e.g., everything happens for a reason), anecdotes about distress and growth, and rules and standard practices related to loss and grieving of relationships. The extent to which broad cultural narratives involve elements of recovery and growth can

also distally impact how an individual reacts to loss. Moreover, role models for these cultural elements are required in order to establish them as important within an individual's worldview. The importance of role models of pro-growth behaviours is also seen within self-determination theory (Ryan & Deci, 2000). Within this framework, individuals are exposed to a variety of rules and norms surrounding stress, coping, and goals for recovery. In order for these goals to be internalized and then achieved, individuals must feel a sense of relatedness to those in their social surroundings. This is particularly true when individuals are faced with both complementary and competing values, such as within a multicultural context.

Based on these cultural influences on the growth process, it was hypothesized that interactions with members of one's cultural group would be more beneficial in the growth process than interactions with individuals within a larger social context. Those sharing the same ethnic background can act as models and teachers related to recovery norms and schemas that are important following loss. Moreover, closely identifying with and committing to this ethnic group will increase the internalizing of these cultural lessons, thereby increasing growth following loss. The quantitative results within the present study did not support this hypothesis and indicated that interactions with one's ethnic group may not be as important as the working through found within the individual's broad social network. Degree of commitment to a specific ethnic identity also did not significantly influence the growth process, though exploration of ethnic identity was positively predictive of growth. It is possible that individuals may benefit from gaining support and lessons from any individual that they feel connected to in an important way. Thus relatedness to others is a central factor in growth, but individuals

can have more autonomy than initially expected with respect to who they relate to and connect with. Different social connections may introduce the individuals to worldviews outside of their specific cultural group, or may display messages related to loss and recovery that are consistent with their cultural group. The process of exploring, increasing understanding, and learning about the beliefs of their ethnic group and others allows for a more meaningful interaction with cultural elements as well as increased propensity for growth following loss. Therefore, the results of the present study indicate that within a multicultural, North American context it is challenging to identify the specific schemas and models for recovery that individuals receive following loss as many influences interact to create an environment in which growth can occur.

A challenge within the present study was differentiating between support received from one's broad social network and specific members of one's ethnic group. Within the qualitative responses given, participants did not specify exactly who provided them with any given form of support. Moreover, it is likely that the support received from one's ethnic group was subsumed within reports of general social support following the loss. This is likely particularly salient for the large proportion of Caucasian participants as this group makes up a large part of the population of Windsor and the surrounding area. The overlap between different sources of social support confounds the direct comparison between general and ethnic group specific social support, though it does not diminish the importance of either type of support following the experience of loss. The types of responses given by participants reflected general theories of social support, but did not reflect unique or group-specific forms of support. Though some trends were seen based on group differences, the overall themes identified within the qualitative responses are

likely no different from themes that would have been identified if individuals had been asked to comment on support from their general social network. This result indicates that there may be very specific forms of support unique to certain groups, but they were not evident within a primarily Caucasian sample of Canadian university students.

One trend that did emerge within the qualitative responses was that members of ethnic minorities reported that members of their ethnic group did not know about their loss and did not help them cope with their loss at a much higher rate than Caucasian participants. Many factors can influence this result. For example, many university students move away from home for their education. Therefore, participants in the present study may not be living nearby members of their ethnic group that had historically been their primary supports. Rather, within a university setting, individuals are more likely to turn to new friendships and relationships that are built more out of convenience (e.g., roommates, neighbours, classmates) than shared beliefs and worldviews.

As outlined above, the present sample on average scored lower on measures of ethnic identity exploration and ethnic identity commitment than were found in previous studies. Scores on this measure of ethnic identity can correspond to stages of Phinney's (1989) model of ethnic identity development. Higher scores on ethnic identity exploration would indicate that participants were generally within the exploration stage of identity development (stage two); whereas higher scores on the ethnic identity commitment subscale would correspond with stage three of Phinney's model and commitment to a specific group and identity. Low scores on both these subscales indicate that the majority of individuals within the present study were likely within the 'unexamined' stage of ethnic identity development. Phinney (1989) noted that this occurs most often when

individuals are young and have not yet needed to explore their ethnic identity. Individuals within this stage adhere closely to larger cultural norms without question. Based on the various characteristics of the present sample, findings indicative of an unexamined ethnic identity are not unlikely. The average age of participants was approximately 20 years old. Though participants had left childhood, many individuals to this point in their lives may not have had a wide range of cultural experiences that force them to review their own identity. Thus results can represent a general ignorance about ethnic identity experiences and influences.

Additionally, the vast majority of the present sample identified as Caucasian, the dominant ethnic background within a Canadian context. In general, members of the dominant culture or ethnic group are often unaware of what aspects of their behaviour or identity are actually related to ethnicity. In other words, their ethnic identity is taken for granted and assumed to be applicable to all those in their surroundings (Sue & Sue, 2008). This difference in how Caucasian individuals view their culture as compared to members of minority groups is captured within Sue and Sue's (2008) differing models of identity development. They identify that Caucasian identity development takes a slightly different path than visible minority identity development within a North American context. In one context Sue and Sue (2008) describe within their Racial/Cultural Identity Development model that identity development for visible minorities involves working towards an integrated and committed identity involving an awareness of how both their majority and minority cultural elements can impact their lives. When describing the stages of White Racial Identity Development (Sue & Sue, 2008), the focus is on understanding the reality of White privilege and one's 'whiteness' in the context of other

cultural groups while engaging in antiracist behaviours. Within the Racial/Cultural Identity Development model (Sue & Sue, 2008), a great deal of time is spent identifying positive and negative aspects of different identities and incorporating them into a cohesive individual identity that holds meaning for the individual. Within the descriptive model of White Racial Identity Development, very little attention is given to understanding what being Caucasian really means to the individual and how an attachment to this identity can be beneficial, particularly when making sense of stress and loss. Instead the focus is given to appreciating other groups and being more aware of diversity within others.

Racial identity theories tend to take a group specific view of identity development based on race and have noted differences in what it means to have developed a strong sense of racial identity and what challenges one must go through prior to achieving that identity. Phinney's (1989) conceptualization of ethnic identity takes a more universal view of identity development while still allowing individuals to uniquely identify the identity to which they commit. In this way, members of all ethnic groups have the propensity to develop an ethnic identity. Yet, this generalist approach fails to take into account the broader differences in development and the impact that these differences may have on mental health outcomes. This influence was evident in the present study in the interaction between ethnicity, ethnic identity exploration, and PTG. The moderating effect of ethnicity on the relation between ethnic identity exploration and PTG supports the idea that stages of identity development hold different meaning and struggle for different ethnic groups. Moreover, among this primarily Caucasian sample, exploration of ethnic identity was a significant predictor of growth, but ethnic identity commitment

was not. Together, these results indicate that gaining a better understanding of ethnicity, ethnic identity, and culturally-relevant practices and beliefs is beneficial following loss, and this is particularly true of young Caucasian participants. This exploration of identity and cultural connections is more important than committing to an ethnic identity or group.

The most consistent significant result of the present research is that ethnicity itself is predictive of growth following loss. The finding that ethnicity explained more of the variance in growth following loss than ethnic identity commitment and even ethnic identity exploration points to the possible larger impact of broad cultural variables on posttrauma functioning than individual identity. The influence of cultural context has been reviewed by many researchers. Its role within stress research has been thoroughly explored in the context of coping with stressful events. Many models of coping indicate that the ability to overcome stressors is nested within the cultural context in which the individual exists. Aldwin (2007), for example, noted that culture can influence coping and use of social supports in four ways. Culture impacts the stressors that individuals are exposed to, the appraisals they make of those stressors, the coping strategies they use in the face of the stressors, and the institutions available to assist in that coping. Moreover, cultures and ethnic groups often have a set of norms in which to understand a traumatic event or loss, thereby impacting how those within one's ethnic group react to the trauma. This reaction of others can also have a significant influence on the effective use of coping strategies in a given situation (Aldwin, 2007). Though coping is not equivalent to growth following loss, the same influences of culture are evident within the growth process. For example, cultural influences on the appraisal of stressors impact the degree to which

worldviews are disrupted following loss and therefore impact the propensity for rebuilding those worldviews in a way that promotes growth and meaning making (Calhoun & Tedeschi, 2006). Moreover, using emotion-focused coping and social support coping in the face of crisis promotes cognitive reprocessing of events which can lead to growth (Riley, LaMontagne, Hepworth, & Murphy, 2007). Yet, different cultures have varying views of the appropriateness of these forms of coping behaviours.

Within the present study, those participants identifying as Asian experienced the greatest amount of growth, significantly more than other ethnic and cultural groups. When qualitative responses were reviewed from members of this group, no ethnic-specific forms of social support were evident that assisted the individuals to cope and grow following their loss. In fact, a high proportion of Asian participants noted that members of their ethnic group reacted with a lack of support in the face of the loss and felt that the loss was expected. Of those that did note helpful forms of support, appraisal support through speaking about the loss was common. It is possible that those participants identifying as Asian had a larger or more appropriate store of coping strategies that would lead to growth following loss outside of only those related to social support. In this case, it would not matter as much how closely they identify with a given identity or culture, but simply that they experienced and learned from that culture at any given point in time. Moreover, though those identifying as Asian scored highest on PTG, the vast majority of these individuals are current Canadian citizens or permanent residents. This implies that they have had exposure to both Asian and Canadian cultural elements that influence the growth process. Some researchers speculate that this bicultural experience can in fact broaden the coping strategies available to an individual

and increase their ability to grow following stress (Aldwin, 2007). Additionally, research comparing Asian, Asian American, and European American individuals coping with stress has shown a general trend in that Asian participants use social support to cope significantly less than European Americans (Kim, Sherman, & Taylor, 2008). Results for Asian Americans' use of social support fell between these two groups, supporting the findings within the current study related to Canadian-born Asian participants being influenced by both traditional Asian values and coping strategies and those common within a North American context.

Previous research comparing PTG across ethnic and cultural groups saw general trends of increased PTG and meaning making within Asian populations (Kiang & Fuligni, 2010). Asian cultures may have a variety of distinct features that influence growth, but variables commonly discussed in the context of growth may also have a differential effect in Eastern compared to Western cultures. Within Tedeschi and Calhoun's (2004) depiction of PTG, the primary focus on growth stemming from cognitive dissonance and confusion may not be the only path to growth. As Splevins and colleagues outline, "a Western cultural script allows for the development of a social role of trauma survivor/victim with a focus on unique personal experience, change, and identity that is incongruent with cultural expectations of an interdependent self or social roles within a collectivistic culture" (2010, p. 262). But this may not be the only script for what it means to be a trauma survivor.

The use of social supports is one area where individuals may differ based on ethnic group. Asian culture is generally viewed as collectivist in nature, with social supports related to belonging and togetherness being more socially acceptable and

beneficial than the disclosure of personal information and communication related to stress (Kim, Sherman, & Taylor, 2008). Though it is often these opportunities for communication that are seen as the supports most conducive to growth, many values within collectivist societies run contrary to using social support in this way. For example, the ideas of self-control and emotional self-suppression are seen within many Western and individualist societies as hindrances to recovery and connecting with others. Yet, research has found that within collectivist societies, this muting of emotional expression is highly valued and increases interpersonal harmony within intimate relationships and one's broad social network (Wei, et al., 2013). This is conducive with the idea that collectivist cultures place focus on group well-being as compared to individualized personal growth. One would assume that a culture focusing on nondisclosure, self-suppression and group well-being would hinder the cognitive reprocessing of emotional material related to the loss. Yet, in the present study, those identifying as Asian reported the most growth following their loss indicating that there is more to PTG than cognitive processing with important others.

Collectivism, group belonging and togetherness, and a more fluid self-concept may better describe the route to growth within Asian cultures. Some researchers in fact speculate that distress following loss for those within collectivist cultures is related less to a disruption in their pretrauma identity, and more to difficulty fulfilling social roles following the trauma experience (Splevins, et al., 2010). This is reflected within the Confucian goal of self-cultivation through the relational self. From this perspective, individuals are seen as being at their best when they are embedded within their social surroundings and working towards tasks that fulfill expectations and obligations of

others. As indicated by Hwang and Chang (2009), “positive interpersonal bonds are developed and maintained by the mutual fulfillment of obligations within a hierarchical and collectivistic societal structure” (p. 1016) rather than working toward individualistic goals. As such, culturally-relevant therapies within Confucian societies often place less focus on speaking to professionals about exact emotional concerns. Instead, therapies include periods of isolation, introspection about what the individual has given to and taken from relationships (Naikan therapy), and re-entering daily society through engaging in purposeful activities for others (Morita therapy). These acts foster self-cultivation by highlighting valued aspects of an individual’s character and ridding the mind of drives that distract from relational goals (Hwang & Chang, 2009). The unique types of social involvement that are displayed within these therapies are not widely engaged in within Western cultures, and are likely not assessed using common measures of perceived social support and psychological functioning. The concepts themselves may also be understood in such a way that describing them qualitatively may be challenging, particularly for participants within the present study.

Additionally, though Western cultures tend to place value on personal well-being there is also a traditional tendency to apply a medical model to symptoms as well as to general functioning (Sue & Sue, 2008). In contrast, certain aspects of Eastern culture, such as a constant search for meaning, self-improvement in order to assist others, and a holistic view of health and recovery, may be more related to specific elements of PTG (Splevins et al., 2010). The differences in how broad groups can interpret and be impacted by events are reflected in the difference in structure model of the Posttraumatic Growth Inventory among Chinese and Japanese populations (Levine et al., 2008; Taku et

al., 2007). That being said, Eastern cultures encompass a large range of experiences and beliefs, each with a unique understanding of personal and interpersonal growth following loss and challenge. These cultural values also interact with personal characteristics to influence growth and postloss functioning.

It is interesting to note that the results of this study indicate ethnic group differences for PTG, but no group differences in PTSD symptomology. Previous research on ethnic group differences in PTSD are mixed, with some reporting significant variation across ethnic groups (Roberts, Gilman, Breslau, Breslau, & Koenen, 2011) and others reporting no significant differences (Breslau et al., 2006). Moreover, when group differences were found they may be related to increased exposure to traumatic events among minority individuals rather than a specific vulnerability to mental health concerns. The results of the present study may indicate that within the cultural contexts of study participants, individuals have a set of strategies and protective factors to mitigate significant distress following loss, and these strategies are essentially equivalent, if not identical, across cultural groups. Yet the same cannot be said for growth. The recipe for growth and meaning of recovery following loss differs across groups and is found to varying extents within different cultures.

Within the present study, no specific gender differences were found, yet gender likely impacted the current results at least to a small degree. The proportion of female participants within the present study was quite high, with over 87% of the sample identifying as female. This overrepresentation of female participants is common when recruiting through the Psychology Participant Pool due to the large proportion of female students within psychology classes at the University of Windsor. Previous research has

shown some differences in reported growth and social support based on gender (Crevier, Marchand, Nachar, & Guay, 2014; Vishnevsky, et al., 2010). Swickert and Hittner (2009) indicate that females are more likely than males to use social supports as coping strategies in times of crisis and this form of coping may partially mediate the relation between gender and positive outcomes following stressful life events. Gender differences have been linked to both biological and social factors that influence females' desire to associate with others when distressed. In contrast, males are often discouraged from seeking out supports in order to maintain a strong stance, preferring to use individual coping strategies (Swickert & Hittner, 2009). Due to the focus of the present study on relationship loss, the impact of gender and the different importance that each gender places on relationships and intimacy could largely influence the results. Moreover, though a small number of males did participate within this study, the male participants may not be representative of the larger male population. For example, they have chosen to major in psychology or take a psychology class as an elective, possibly indicating a larger interest in social interactions, relationships, and disclosure of emotional experiences, which can influence outcomes after trauma and loss (Crevier, et al., 2014). Further research is required to test the gender invariance found within the present study.

One outcome of the present research that greatly adds to the research area was that previous exposure to traumatic and stressful life events was related in some instances to an increase in PTSD symptomology and diminished growth following relationship loss. This finding provides mixed support for previous research in the area of cumulative trauma. As found in many studies by Kira and colleagues (Kira, Templin et al., 2008; Kira et al., 2012), an increase in trauma exposure creates more vulnerability for

posttraumatic stress symptomology and can greatly impact overall functioning. Yet, previous research has also shown that increased trauma exposure can foster growth opportunities within different samples (Kira et al., 2013). It is possible that the form of traumatic event described within the present study could impact on the relation between cumulative trauma and PTG. Within Kira's (2001) developmental-based trauma framework, the loss related trauma that participants of the current study experienced is likely a type I or II trauma (dependent on their previous experiences of loss). The primary impact of this relationship loss is on the individual's attachment to others. Since this trauma occurred in adulthood or late adolescence, it likely had less of an impact on functioning than childhood attachment traumas (Kira, Fawzi, & Fawzi, 2012). Within the limited research on this trauma taxonomy and PTG, type I traumas were found to be positively related to PTG, whereas type II traumas were unrelated to growth experiences (Kira et al, 2013). Thus the present study does not offer support for the differential impact of trauma type on growth.

As indicated, the impact of cumulative exposure to trauma on growth has not been a primary focus of trauma research to date. This was the first study to examine the relation between cumulative trauma and growth within a primarily Caucasian and Canadian sample. Therefore, it is possible that the relations seen in previous studies do not fully apply within the present context. Though the results related to cumulative trauma are mixed, the impact of this important variable should not be ignored. Within the present study, it appears that previous trauma exposure is one variable that could differentiate between the experience of PTSD and PTG. Yet, it should be noted that cumulative trauma was significantly positively skewed within the present analysis. The

generally lower frequency of previous traumatic experiences within the present sample may have impacted cumulative trauma's relation with current PTG and PTSD symptoms. Additional research is required to further explain and continue to develop theories related to cumulative trauma and positive posttrauma outcomes.

Limitations and Future Directions

The sample within the present study was representative of the larger population from which the participants were drawn at the University of Windsor. Yet, this posed a significant limitation for the generalizability of the research findings as a large proportion of the participants identified as female and Caucasian. The high proportion of female participants could have skewed ratings of social support and PTG within the present research as female participants tend to rate these variables higher than their male counterparts. Future research would benefit from including larger proportions of male participants, as well recruiting individuals from outside of psychology courses as these individuals may have specific characteristics that increase their likelihood of seeking out supports and finding benefits following loss.

The large number of Caucasian participants within the present study was also problematic, particularly related to the exploration of ethnic identity. For example, Caucasian participants in the present study may not have ever considered their ethnic identity, making it challenging for them to reflect on how that identity allowed them to grow following loss. Thus the data may have been skewed from this large group. Moreover, the results of the present study may not be generalizable to populations with a higher proportion of non-Caucasian individuals. In spite of the large number of Caucasian participants, after initial data collection was completed it was decided not to

continue recruitment of participants who came from other ethnic backgrounds in order to diversify the sample. Based on hypothesized relations among variables, group differences were not the initial focus of the present research and Caucasian participants have the ability to connect with different aspects of their ethnic identity, though this process may only be at the beginning stages for university-aged individuals. Testing the hypotheses of the current study within populations with more ethnic diversity, as well as within settings in which the majority group is not Caucasian, would greatly add to research in this area. Additionally, based on small numbers of non-Caucasian participants in the present study, many groups needed to be collapsed in order to retain statistical validity. For example, grouping Hispanic, Black/African-Canadian, and Aboriginal participants together within the 'other' category did not allow for the unique experiences of these cultural groups to emerge within the results of this study. Retesting the relations and recreating results with a larger proportion of minority groups would allow for more detailed and valid analysis of the trends within these groups, rather than having subtle trends overshadowed by the large Caucasian majority within the present study.

Though some relations within this study were found to be significant, the effect sizes overall were quite small. This could be a reflection of the smaller sample size used within the study, thereby reducing the power to detect smaller relations among variables. It is likely that PTG's relation to ethnic identity commitment, ethnic identity exploration, and ethnic social support is only a small part of the story that explains the development of PTG following loss. Moreover, these variables are not unidimensional or simplistic. For example, previous research has elicited larger effect sizes when reviewing the relation between religious affiliation or belonging and growth. It is likely that ethnic identity is

closely related to religious variables and can be encompassed within these larger cultural beliefs and worldviews.

As seen within the present research, social support from one's ethnic community was highly correlated with general social support, indicating that it may be difficult to parse out what support was really received from one group as compared to another. From participants' perspectives, there may be individuals that fall within both groups, making the distinction between different forms of social support even less clear both conceptually and statistically. The lack of specificity within qualitative responses indicates that it is unclear who respondents were referring to, if they have many supports within their ethnic group or few supports, and what community specifically they viewed as being *their* ethnic group. This could have been particularly problematic for biracial or multiracial individuals. Though they were given flexibility in who they interpreted as being within their ethnic group, this may have caused them to exclude supports coming from one area of their ethnic identity. Future research would benefit from comparing and contrasting different sources of social support in more specific ways, for example identifying two important individuals representing different support networks and comparing the supports received from these specific individuals.

Another reason for the smaller effect sizes within the present study may be the nature of the traumatic experience described by participants. The present study examined lowercase 't' traumas (Shapiro, 2001), or events that are a regular part of everyday functioning, but that cause high levels of distress and emotional upheaval when they occur. Relationship losses can elicit very high stress and trauma-like symptoms, but they can also be fairly benign events depending on the nature of the loss. The highest PTG

scores in the present sample were from individuals who experienced the death of a loved one, but many individuals within the study were university students who experienced a relationship breakdown. It is possible that this form of event did not elicit the same opportunities for growth and support as the death of a loved one. Attempts were made to remove cases that did not report significant distress at the time of the loss, but it is likely that the final sample included some loss experiences that did not significantly impact the individual. Future research would benefit from testing these same relations with different forms of traumatic experiences, including those that generally have a long-lasting effect on the individual, such as war related experiences. Moreover, testing the relation between ethnic identity and PTG related to an ethnically bound traumatic event, such as discrimination-based abuse, may elicit different results. This was the case, for example, in a study by Khaylis and colleagues (2007) in which the effect of race-related stress on PTSD symptomology was moderated by ethnic identity. No studies to date have tested whether ethnic identity can impact similar relations with PTG.

Future research would benefit from reviewing the relations shown within the current study within a larger sample in order to increase power within the analyses. Increased power would also allow for the testing of additional variables that could impact growth. As noted in Aldwin's (2007) sociocultural model of stress, coping, and adaptation, the interaction between an individual's experience of a traumatic event as well as their beliefs surrounding that form of trauma, or the beliefs of those around them, can greatly impact the growth and coping experience. For example, if an individual has recently experienced the suicide of a loved one, but suicide is viewed as a sin by their primary reference group, they may have a more difficult time incorporating this event

into their self-concept and finding meaning from the experience. Results of the open ended questions within the present study also indicated that supportive and unsupportive social interactions were impacted when certain interpersonal relationships were opposed by members of their ethnic group. This result is in agreement with aspects of self-determination theory, in which individuals are significantly shaped by the beliefs and opinions of those around them (Ryan & Deci, 2000). These opinions have even greater impact when an individual feels connected to those that are promoting these ideas. Both positive and negative beliefs can be internalized over time within the individual's own belief system and can subsequently impact broad functioning. Therefore it is likely that the opinions of others within one's social circle regarding trauma, loss, relationships, and mental health influence trauma outcomes in a variety of ways. Additional research on the combinations and constellations of others' beliefs and reactions would be an important contribution to research in this area.

A major limitation of most research on posttrauma functioning is that the studies are cross-sectional. Participants reported their perceptions of their current and past functioning. It is possible that these reports were not accurate or incorporated information that did not portray the individual's true experience following their loss. Though social desirability was controlled for within the study and found to be unrelated to PTG, the nature of the questions asked within the study could also influence respondents ratings of their growth, posttraumatic stress symptoms, ethnic identity, and perceived social support. Longitudinal studies that assessed functioning pre and posttrauma would greatly add to the literature in this area and allow for the exploration of cause and effect relations between PTG, social support, and ethnic identity.

Though the present research attempted to incorporate an etic approach to identity development with posttrauma functioning, this approach did not do justice to the diversity that exists within postloss reactions based on ethnicity and other variables. Finding similarities across groups can be beneficial within research on PTG, but it presupposes that the framework of PTG and ethnic identity can be applied to all groups and identities. The present study dispelled the idea of stability within the concepts of growth and identity in two ways. First, the concept of PTG appears to differ across cultural and ethnic groups. This is an indication that the growth concept emerged from Western ideals and values that are not as applicable in all groups tested. Second, ethnic identity development, as noted by Sue and Sue (2008), can take a drastically different form within majority populations than it does within minority groups. The lack of attention to discrimination experiences and the luxury that certain groups have to not have to think about their ethnic identity indicate that while all individuals can form an ethnic identity, ethnic identity in and of itself may not be a construct that can be generalized across groups. Therefore, studies that examine PTG and ethnic identity within cultural groups that display increased homogeneity of experiences may inform research on this area in a more culturally appropriate way.

One important contribution of the present study was further research on the effects of cumulative trauma exposure on PTSD and growth. Future research is required in this area to clarify these relations. For example, identifying specific profiles of trauma experiences may be more influential on the growth process than simply the frequency of trauma occurrence, as was measured in the present study. Kira's (2001) framework for understanding and classifying trauma experiences would be a relevant basis for these

profiles and the applicability of this classification system should be tested across cultures and ethnic groups.

Overall, this study was the first step in a larger area of research that has yet to be explored relating ethnic identity to trauma outcomes and social support. Future studies are needed to explore whether the results found here are representative of the larger Canadian and international population. Studies focused both on diversity and specificity of experiences would expand the research area and clarify important and interesting trends that were only marginally evident within the present research.

Clinical Implications

The results of the present study influence clinical practice following loss in a variety of ways. Most importantly, the present study supports previous research indicating that personal growth is possible following loss. Thus, a return to baseline functioning following stressful life events does not need to be the final goal for all individuals. A focus on moving beyond preloss functioning and finding meaning within an event can greatly benefit individuals and should be the goal of psychologists, counsellors, and other healthcare professionals. The present study provided additional support for previous research that indicates positive social supports following traumatic and stressful life events are crucial to the growth process. The present results further stipulate that it does not necessarily matter where these supports are found, whether they are from one's ethnic community or general social network, through community centres, support services, cultural centres, or places of religious worship. Rather, supports of all kinds can be beneficial following loss, as long as they are found to be relevant by the individual. Therefore, it is important for counsellors working with these individuals to be

aware of the broad range of social support networks and resources available to the individual and assist them in locating supports that are helpful for them in the present moment. Specific support groups related to loss events could benefit some individuals, as indicated by the fact that some participants of the current study qualitatively reported that healing and growing together with others helped them cope following loss.

A consistent relation was not found within the present study between ethnic identity commitment and PTG, but some significant correlations were found between these variables. Moreover, ethnic identity exploration was found to significantly predict growth within this primarily Caucasian sample. Though developing and exploring one's ethnic identity may not be the primary source of growth following loss, individuals should be encouraged to explore their ethnic identity and how that may impact their understanding of their loss. Future research may shed more light on the mechanisms through which this relation exerts its influence on growth, thereby making treatment recommendations more specific. Clinicians should be aware that specific ethnic groups do have a larger propensity for growth opportunities and that there are many paths to growth. Therefore, practices from different cultures and perspective should be incorporated into culturally-sensitive treatment to maximize recovery and growth for all individuals.

A further important implication of the present research is the impact of previous trauma exposure on present functioning following loss. This appears to be a particular risk factor for PTSD symptomology and is significantly negatively related to growth following loss. Research has shown a curvilinear relation between previous trauma exposure and symptomology. Specifically, less exposure to stressful life events causes

more disruption in worldview following a trauma, yet more exposure creates a heightened vulnerability to stress (Shakespeare-Finch & Lurie-Beck, 2014). This can have a significant impact on daily functioning and success in treatment. Clinicians should work to provide individuals with adequate supports and coping strategies early within the lifespan in order to mitigate the impact of cumulative trauma and allow for growth opportunities as individuals inevitably continue to experience significant stressors and challenging life events.

In conclusion, the present research highlights the importance of looking beyond symptomology to the mental health that individuals can possess. Though many can experience distress, sadness, and confusion during times of loss, they have the potential of not only reducing this distress over time, but actually growing and learning from these experiences to become stronger. Often this growth is associated with communicating with others and openly discussing reactions to loss, but this is not the only path to growth. Through the support of social networks, larger culture, and individual worldviews, individuals are able to cope, grow, and find meaning in their experiences which adds richness to their lives and moves them beyond their preloss selves.

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APPENDICES

Appendix A: Screening Questionnaire

Participation Criteria

The loss of a relationship can happen for many different reasons. A loved one can pass away, you can experience the breakdown of a romantic relationship, or you can be forcibly separated from close family or friends.

Have you experienced a relationship loss that caused you stress and/or sadness?

Yes

No

Did this loss happen within the past five (5) years, but not in the past three (3) months?

Yes

No

Appendix B: Relationship Loss Questionnaire

Relationship Loss Identification

Many people experience distressing relationship losses throughout their lives due to relationship breakdown, death, and other circumstances.

Think of a specific relationship loss that you have experienced within the past five years, excluding the past three months. If you have experienced more than one relationship loss in that time, think of the one that most affects you right now.

From the following list identify the type of relationship loss experienced:

- Sudden or not sudden death of someone close to you
- Separation, divorce, or serious relationship breakdown
- Forced separation from one or more loved ones
- Other, please briefly describe the nature of the event

Please respond to the following questions about your relationship loss:

When did the loss occur?

Month:

Year:

The relationship that I lost was with my:

- Mother
- Father
- Brother or sister
- Romantic partner
- Close friend or other family member
- Other, please specify:

How much stress do you remember experiencing at the time of the loss?

- 1 - No stress
- 2
- 3
- 4 - Moderate stress
- 5
- 6
- 7 - High stress

The loss:

- 1 - Happened very suddenly
- 2
- 3
- 4 - Was somewhat expected
- 5
- 6
- 7 - Happened over a number of years

Appendix C: Ethnic Label Questions from Multigroup Ethnic Identity Measure – Revised

(MEIM – R)

People come from a lot of different cultures and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the name of ethnic groups are Mexican-American, Hispanic, Black, Asian-American, Native Canadian, Anglo-American, and White.

Every person is born into an ethnic group, or sometimes two groups, but people differ on how important their ethnicity is to them, how they feel about it, and how much their behaviour is affected by it.

In terms of ethnic group, I consider myself to be:

My ethnicity is:

- White, Caucasian, Anglo, European American
- Black, African American, or of African descent
- Latino or Hispanic
- Aboriginal/First Nations
- East Asian (e.g., China, Korea, Taiwan, etc.)
- Southeast Asian (e.g., Cambodia, Indonesia, Laos, Vietnam, etc.)
- South Asian (e.g., India, Pakistan, Sri Lanka, etc.)
- Arab
- Biracial (please specify): _____
- Multiracial (please specify): _____
- Other (please specify): _____

My mother's ethnicity is:

- White, Caucasian, Anglo, European American
- Black, African American, or of African descent
- Latino or Hispanic
- Aboriginal/First Nations
- East Asian (e.g., China, Korea, Taiwan, etc.)

- Southeast Asian (e.g., Cambodia, Indonesia, Laos, Vietnam, etc.)
- South Asian (e.g., India, Pakistan, Sri Lanka, etc.)
- Arab
- Biracial (please specify): _____
- Multiracial (please specify): _____
- Other (please specify): _____

My father's ethnicity is:

- White, Caucasian, Anglo, European American
- Black, African American, or of African descent
- Latino or Hispanic
- Aboriginal/First Nations
- East Asian (e.g., China, Korea, Taiwan, etc.)
- Southeast Asian (e.g., Cambodia, Indonesia, Laos, Vietnam, etc.)
- South Asian (e.g., India, Pakistan, Sri Lanka, etc.)
- Arab
- Biracial (please specify): _____
- Multiracial (please specify): _____
- Other (please specify): _____

Appendix D: Instructions for Interpersonal Support Evaluation List (ISEL)

Instructions for first administration (general social support):

This scale is made up of a list of statements each of which may or may not be true about you.

Think about the relationships you have with all members of your social group (friends, classmates, family, etc.) as you answer the questions.

For each statement check “definitely true” if you are sure it is true about you and “probably true” if you think it is true but are not absolutely certain. Similarly, you should check “definitely false” if you are sure the statement is false and “probably false” if you think it is false but are not absolutely certain.

Instructions for second administration (ethnic social support):

Please respond to the following statements thinking only about the relationships you have with members of your ethnic community.

For each statement check “definitely true” if you are sure it is true about you and “probably true” if you think it is true but are not absolutely certain. Similarly, you should check “definitely false” if you are sure the statement is false and “probably false” if you think it is false but are not absolutely certain.

Appendix E: Demographic Questionnaire

Please respond to the following demographic questions:

Gender:

Age (in years):

Program of Study:

Year in Program:

Yearly Household Income:

- less than \$15 000
- \$15 000 – 19 999
- \$20 000 – 29 999
- \$30 000 – 39 999
- \$40 000 – 59 999
- more than \$60 000
- Prefer not to answer

What is your current citizenship status?

- Canadian citizen
- Permanent resident
- Landed immigrant
- Refugee
- Student Visa
- Other, please specify: _____

What is your country of birth?

What is your religious affiliation?

- Nonreligious/Agnostic/Atheist
- Nonreligious, but spiritual
- Jewish
- Muslim
- Christian
- Buddhist
- Hindu
- Unknown
- Other, please specify: _____

Appendix F: Consent Form



CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: **University students' experiences of relationship loss**

You are asked to participate in a research study conducted by Jennifer Marcus, M.A. (Ph.D. candidate), under the supervision of Dr. Ken Cramer (Professor), from the Department of Psychology at the University of Windsor. The results of this study will contribute to Ms. Marcus's Ph.D. dissertation.

If you have any questions or concerns about the research, please feel free to contact Jennifer Marcus at marcusj@uwindsor.ca or Dr. Ken Cramer at krcramer@uwindsor.ca or (519) 253-3000, ext. 2239.

PURPOSE OF THE STUDY

The purpose of this study is to examine the effects of relationship loss on university students, as well as their social relationships and individual and group identities.

PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following tasks:

- Fill out a series of questionnaires about yourself, your social relationships, and your involvement in your ethnic community
- Think about the relationship loss that you have experienced and fill out questionnaires related to your reactions to the event
- Read a post-study information form

Duration: 30 minutes

Location: Completed online

You will not be contacted for follow-up sessions.

POTENTIAL RISKS AND DISCOMFORTS

This study does not have any major risks associated with participation. You may experience some emotional discomfort in response to thinking about the relationship loss you have experienced, but this should be no more than you would normally encounter in your day-to-day activities. However, you do not have to answer any questions that you do not feel comfortable answering.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

This study will expose you to ways in which people react to loss and deal with stress. By responding to the questionnaire items, you may learn about new ways to cope with stress more effectively and become more aware of your own connections to others.

As a participant, you will gain experience being a part of the research process.

The results of this study will be used to inform future research about the effects of experiencing a relationship loss. The results may be used to create interventions to assist individuals in finding meaning in their difficult experiences.

COMPENSATION FOR PARTICIPATION

You will receive 0.5 bonus points for 30 minutes of participation towards the psychology participant pool, if registered in the pool and enrolled in one or more eligible courses.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified as connected to you will remain confidential and will be disclosed only with your permission. Your identity will be used only to allocate participation marks appropriately. Our data will be stored on a computer and coded with a random number so as to maintain a degree of anonymity. No information that discloses your identity will be released or published without your specific consent to disclosure. No confidential records will be consulted. The data being collected will be kept separate from potential identifiers like participant pool mark allocation. Data will be kept in a secure location to which only the researchers will have access. In accordance with the American Psychological Association, your data will be kept for 5 years.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw without consequences of any kind. You may also refuse to answer any questions you do not want to answer and still remain in the study. Your participation in this study is completely voluntary. If you choose to participate, you have the right to discontinue your participation at any time during this experiment, even after providing consent, up until you have submitted all survey data. Should you choose to discontinue the study once you have begun, you will still receive your credits. The investigator may withdraw you from this research if circumstances arise which warrant doing so. Note: In order to withdraw from the study you must press the '*Discard Responses and Exit*' button included at the bottom of every survey page. Closing the internet browser will not withdraw you from the study or delete your responses.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

A user friendly, brief summary of research findings for this study will be available to participants by October 15th, 2014 on the University of Windsor REB web site: www.uwindsor.ca/reb

SUBSEQUENT USE OF DATA

These data may be used in subsequent studies, in publications, and in presentations.

RIGHTS OF RESEARCH PARTICIPANTS

If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

CONSENT OF RESEARCH SUBJECT/LEGAL REPRESENTATIVE

By clicking the button below, I indicate my understanding of the information provided for the study **University students' experiences of relationship loss** as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I agree to print, save, or request an email copy of this page for my records. To request an email copy please email marcusj@uwindsor.ca

PRINT/SAVE THIS DOCUMENT FOR YOUR RECORDS**Consent to Participate**

- I AGREE TO PARTICIPATE
- I DO NOT AGREE TO PARTICIPATE

Appendix G: Post-Study Information Form

Thank you for completing this study on university students' experiences of relationship loss.

Click [here](#) to open a separate window and database to obtain your participant pool marks.

The topic of this research is posttraumatic growth, or the idea that one can experience benefits and find meaning in traumatic and stressful life events. Research has shown some individuals can in fact have more positive interpersonal relationships, have a more positive self-concept, and have a better outlook on life after they have experienced and coped with a traumatic event. This study aims to assess how variables such as social support and ethnic identity affect growth after relationship loss.

Sometimes the events you experienced can be difficult to think about. They can cause people to feel strong emotions related to anxiety, sadness, and fear. If you, a friend, or a family member have questions, would like someone to talk to, or need help with a problem, it is recommended that you take advantage of one of the following services available to individuals in your area.

Student Counselling Centre 293 CAW Centre, 401 Sunset Ave. Windsor, ON N9B 3P4 Tel: (519) 253-3000 Ext. 4616	Distress Centre of Windsor-Essex County Crisis Phone: (519) 256-5000 (12 noon – 12 midnight) For persons in distress
Mental Health Helpline Information about mental health services in Ontario; Service is 24/7 1-866-531-2600	Amherstburg Community Services (ACS) 400 Sandwich St. S, Unit 31, Amherstburg, ON Tel: (519) 736-5471
Lesbian Gay Bi Youth Line Tel: 1-800-268-YOUTH (Can call from anywhere in Ontario)	Community Counselling Alliance Short-term counselling, subsidized Tel: (519) 254-3426
Community Crisis Centre of Windsor-Essex County - Jeanne Mance Bldg 1986 Ouellette Ave, 1 st Floor Windsor, ON Tel: (519) 973-4435	Sexual Assault Crisis Centre of Essex County (24 hours) 1407 Ottawa St., Unit G, Windsor, ON Email: sacc@wincom.net Tel: (519) 253-9667
Canadian Mental Health Association Windsor-Essex County Branch (CMHA-WECB) 1400 Windsor Avenue Windsor, ON N8X 3L9 Tel: (519) 255-7440	Mood and Anxiety Disorders Treatment Program Windsor Regional Hospital – Western Campus 1543 Prince Rd., Windsor, ON Tel: (519) 257-5125 (Referral from physician required)
Family Service Windsor-Essex County 235 Eugenie St. W., Unit 105-A, Windsor, ON Tel: (519) 256-5358 (Counselling services)	Windsor Essex Community Health Centre Teen Health Centre (THC) 1585 Ouellette Ave. Windsor, ON N8X 1K5 Tel: (519) 253-8481

To find out more about posttraumatic growth and how it benefits the lives of those who experience it, the following articles and books are recommended:

Linley, P. A. & Joseph, S. (2004). Positive psychology following trauma and adversity: A review. *Journal of Traumatic Stress, 17*(1), 11-21.

Prati, G. & Pietrantonio, L. (2009). Optimism, social support, and coping strategies as factors contributing to posttraumatic growth: A meta-analysis. *Journal of Loss and Trauma, 14*(5), 364-388.

Tedeschi, R. G., Park, C. L., & Calhoun, L. G. (Eds.). (1998). *Posttraumatic Growth: Positive Changes in the Aftermath of Crisis*. Mahwah: Lawrence Erlbaum Associates.

If you have any further questions or concerns about the research or would like an email copy of this document, please feel free to contact Jennifer Marcus at marcusj@uwindsor.ca or Dr. Ken Cramer at kcramer@uwindsor.ca or (519) 253-3000, ext. 2239.

PRINT THIS DOCUMENT FOR YOUR RECORDS

VITA AUCTORIS

NAME: Jennifer R. Marcus

PLACE OF BIRTH: London, ON

YEAR OF BIRTH: 1985

EDUCATION: York University, Toronto, ON
2007, B.A. Honours Psychology

University of Windsor, Windsor, ON
2010, M.A. Adult Clinical Psychology

University of Windsor, Windsor, ON
2015, Ph.D. Adult Clinical Psychology