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## The Relationship Among Post-traumatic Growth, Religious Commitment, and Optimism in Adult Liberian Former Refugees and Internally Displaced Persons Traumatized by War-related Events

Hannah Acquaye  
*University of Central Florida*

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THE RELATIONSHIP AMONG POSTTRAUMATIC GROWTH, RELIGIOUS  
COMMITMENT, AND OPTIMISM IN ADULT LIBERIAN FORMER REFUGEES AND  
INTERNALLY DISPLACED PERSONS TRAUMATIZED BY WAR-RELATED EVENTS

by

HANNAH EMMA ACQUAYE

M.Ed. University of Cape Coast, Ghana, 2008

P.G.D.E. University of Cape Coast, Ghana, 2006

B.A. University of Cape Coast, Ghana, 2001

A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
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Major Professors: K. Dayle Jones and Stephen A. Sivo

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## ABSTRACT

One of the myriad consequences of war is displacement and refugee-ism. People become refugees when they no longer feel safe in their country of origin. Before, during, and after the journey towards safety, refugees and internally displaced persons (IDPs) endure several challenging circumstances which stretch their normal abilities to cope. In their efforts to cope, these people report several mental health challenges like sleeplessness, hypervigilance, anxiety, and depression. The reported mental health challenges are normal in this population; however, when they persist, they result in posttraumatic stress disorder. Surprisingly, some also report obtaining psychological growth due to their challenging circumstances.

To examine the interplay of posttraumatic stress disorder and psychological growth in this population, the study was grounded on the cognitive theory of trauma and the broaden-and-build theory of positive emotions. Thus, the relationship among posttraumatic growth, religious commitment, and optimism within adult Liberian former refugees and IDPs traumatized by war-related events became the focus of the investigation. The grounding theories provided four hypotheses that explored the relationship among the constructs, as well as seven exploratory research questions that identified differences among participants.

Through purposeful and snowball sampling methods, five hundred participants were selected as the sample; 444 returned the study package. Participants were adult Liberian former refugees and IDPs who could read and understand English at the 8<sup>th</sup> grade level, and who lived in Monrovia. Participants completed six instruments – the *Posttraumatic Growth Inventory*, the *Religious Commitment Inventory*, the *Revised Life Orientation Test*, the *War Trauma Screening Index*, the *Posttraumatic Stress Disorder Checklist for DSM-5*, and demographic questionnaire.

Results of the study indicated that there was a statistically significant correlation between impact of war-related events and posttraumatic stress disorder, with alterations in arousal and reactivity obtaining the strongest correlation. However, the presence of posttraumatic stress disorder for the Liberian sample could be attributed to the recent reaction to the Ebola virus which re-traumatized adult Liberian former refugees and IDPs.

Furthermore, there was a statistically significant relationship between all factors of posttraumatic stress disorder and all factors of posttraumatic growth. The relationship between factors of religious commitment and factors of posttraumatic stress disorder was statistically significant for some posttraumatic stress disorder factors and not significant for others. Similarly, relationship between optimism and posttraumatic stress disorder was statistically significant for some and not significant for others.

Finally, a structural equation model was conducted to identify latent variables affecting the relationship. Results indicated, as per the hypothesized model, that war events predicted trauma, which in turn predicted posttraumatic growth. However, even though religiousness and optimism could each predict posttraumatic growth, optimism, more than religiousness provided errors that co-varied with errors of trauma, indicating that with the presence of optimism, a person could move from trauma towards growth. Review of related literature situated the current study in the mental health discourse, especially in providing a voice for mental health on the African continent. Detailed methodology was provided, as were results of findings. Finally, summary, conclusions, and recommendations were provided for both mental health workers, counselor educators, and researchers.

For Vulate, PSK, and Clarice...  
because you saw what I couldn't see. I am a testimony of God's grace!

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There is an African proverb that “he who points the setting sun to you is telling you there is no room in his house for you”. Apart from cultural shocks that are part of the adventures of being international, I had a lot of acceptance and nurturing that I had no option but to be successful in a foreign land. I was not shown the setting sun, but given room to blossom!

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## LIST OF ACRONYMS AND/OR DEFINITIONS

IDPs	=	<b>Internally Displaced Persons</b>  Any person who due to natural or man-made disaster, leaves his or her primary place of abode to look for safety and security outside of home but within the same country.
PTG	=	<b>Post Traumatic Growth</b>  Growth that occurs after intense adversity, which moves a person beyond his or her pre-trauma stage to an increased inner strength.
PTSD	=	<b>Post Traumatic Stress Disorder</b>
UN	=	<b>United Nations</b> (Organization)
UNHCR	=	<b>United Nations High Commissioner for Refugees</b>  The division of the United Nations in charge of refugees

## **CHAPTER ONE: INTRODUCTION**

On June 24, 2016, the world awoke with the reverberating news of the results of the United Kingdom (UK) referendum – by a 52% for and 48% against, the UK had decided to leave the European Union (EU) (Wheeler & Hunt, 2016). In what has come to be known as “Brexit,” the decision sent shock waves in political spheres, with the resignation of the David Cameron, the British Prime Minister. The riveting effects hit the financial sector; the pound plummeted to its lowest since 1985, and investors moved risky assets and clamored for the US dollar and Japanese yen (Goodman, 2016). Even though the British displeasure with the EU had been festering for some time, the Syrian refugee crises compounded the dissention, culminating in UK’s decision to pull out of the EU. Refugee crises leave no country unscathed; refugee crises occurring in the Middle East had invariably affected the decision of the citizens of the UK, unsettled the financial world, displeased some world leaders, and exhilarated and validated other political pundits in countries several thousands of miles from the Mediterranean crises.

Subsequently, while some are willing to open their doors to these refugees, others are striving for ways to close their borders, their countries, and their hearts to humans fleeing the horrors of war to find safety for themselves and their families (Robinson & Vasagar, 2015; the Guardian, 2015). Refugees have often heard comments like “they come to take our jobs,” and “they take all our benefits,” from citizens of countries. Others also have several derogatory ways of referring to refugees and immigrants; labels that clearly indicate that they are an unwanted group of people. Refugees therefore flee their homes knowing that they are unwanted wherever they go, and yet having no other option than to appeal to the humanity of people who want nothing to do with them. What the Syrian refugees are experiencing is not a new phenomenon;

the Liberians endured a similar experience during their over a decade-long (1989-2003) civil conflict when rebel factions, who were of their own tribes, meted out atrocities to them. Thus, those who could afford to flee, did so, fleeing to other countries outside the borders of Liberia and obtaining the status of “refugees” (e.g. Côte d’Ivoire, Sierra Leone, Ghana, Nigeria, etc.) Many more Liberians had no option but to stay within the borders of Liberia – a phenomenon referred to as “internal displacement.” The internally displaced left the safety of their homes and fled from one town to another, depending on their perception of relative safety, and sometimes the reported provision of shelter, food, and security.

Internal displacement also occurs in instances where natural disasters (e.g. floods, hurricanes, fires) cause people to evacuate their homes. For example, in May 2016, heavy rainfall caused Houston in Texas to flood. Quite recently in June 2016, during the period of the final edits of this dissertation, there are reports that some residents in West Virginia have become internally displaced due to heavy rainfall that caused homes and roads to be washed away, and about 25 persons reported dead (Fieldstadt, 2016). Both refugee situations and internal displacement push many people beyond their normal coping, resulting in diverse trauma symptoms (e.g. sleeplessness, anxiety, depression).

Despite the adversities experienced by refugees and internally displaced persons, some also report using optimism and religious commitment as means of coping to survive the traumatic experiences endured prior, during, and after conflict. Thus, the purpose of the research was to investigate the relationship that existed among war-related trauma, religious commitment, optimism, and posttraumatic growth in adult Liberian former refugees and internally displaced persons. The hypothesis guiding this investigation was that, “do war-related traumatic

experiences (as measured by the *War Trauma Screening Index* [WTSI, Layne, Stuvland, Satzman, Djapo, & Pynoose, 1999], and the *Post Traumatic Stress Disorder Checklist, DSM-5* [PCL-5, Weathers, Litz, Keane, Palmieri, Marx, & Shnurr, 2013]) affect posttraumatic growth (as measured by the *Post Traumatic Growth Inventory* [PTGI, Tedeschi & Calhoun, 1996]) of adult Liberian former refugees and internally displaced persons (IDPs)? Further hypothesis was, “what part do religious commitment (as measured by the *Religious Commitment Inventory-10* [RCI-10, Worthington et al., 2003]) and optimism (as measured by the *Revised Life Orientation Test* [LOT-R, Scheier, Carver, & Bridges, 1994]) play in this relationship between war-related traumatic experiences and posttraumatic growth of adult Liberian former refugees and IDPs”? The investigation tested the specific directional hypothesis that adult Liberians’ high trauma experience with high religious commitment and optimism increased posttraumatic growth. Moreover, the study examined the relationship among trauma, religious commitment, optimism and posttraumatic growth with reported demographic information of adult Liberian former refugees and internally displaced persons (e.g. displacement status, gender, age, educational qualification, and employment status).

### Reason for the Study

In 2015, nearly sixty million people worldwide were displaced due to refugee and migrant situations (UNHCR, 2015). As of April 2016, 197,696 Syrian refugees had arrived by sea alone, in several European countries, with 1,512 dead or missing (UNHCR, 2016). The demographics from data collected by UNHCR indicate that 35% were children, 20% women, and 45% men. The rippling effect of displacement is that no country, whether developed or

developing, is left unscathed. Studies on refugees and displaced people have focused on problems that plague them (Olema, Catani, Ertl, Saile, & Neuner, 2014; Palgi, Ben-Ezra, Langer, & Essar, 2009; White, 2013). However, recent studies based on positive psychology (Seligman & Csikszentmihalyi, 2000) are studying these survivors from a strength-based perspective (Ghannam & Thabet, 2014; Howell et al., 2015); placing emphasis on what makes them survive and stay strong, instead of what makes them weak and sick.

Bannink (2014) succinctly encapsulates the idea of survival and thriving under an umbrella term “post-traumatic success”, to encompass positive psychology, posttraumatic growth, thriving, adversarial growth, perceived benefits, stress-related growth, and enrichment; constructs that recognize psychological growth after a personal traumatic experience. Inasmuch as she does not differentiate between these constructs, she still consistently advocates for a paradigm shift from deprivation and pathology to strength. Bannink encourages clinicians and researchers to focus on strength-based paradigms like solution-focused therapies, in their work with survivors of trauma. Her proposal aligns with previous researchers who promote the salutogenic aspects of trauma rather than the pathogenic that some earlier researchers focused (Ghannam & Thabet, 2014; Howell et al., 2015). Bannink further recognizes that because people are situated in a broader social context, their need to connect with others come under what she terms “social resilience”. In social resilience, Bannink provides a way for the whole society to share the responsibility of surviving a traumatic experience; an experience like the Liberians went through when the civil war affected the whole country.

It is natural for people to be traumatized in the face of adversity (Friedman, Keane, & Resick, 2016). In war-related populations (e.g. war refugees and internally displaced persons,

demilitarized child soldiers, etc.), the prevalence of trauma and its attendant complications is increased (Betancourt et al., 2011; 2014; 2015). Despite the traumatic challenges refugees encounter, some have shown the ability to survive high levels of exposure to ethnic-related violence and political persecution resulting in family loss and displacement (Betancourt et al., 2015). The ability to grow despite trauma provides a basis for mental health professionals in their work with refugees, former refugees and displaced persons (Clarke & Borders, 2014), especially as both clinicians and clients endeavor to focus on strength-based consequences of traumatic experiences instead of disorders that come from the traumatic experiences.

In addition to other positive psychological variables, to my knowledge, there is only one study that has assessed posttraumatic growth within the general repatriated population of a country following traumatic events in war time (Powell, Rosner, Butollo, Tedeschi, & Calhoun, 2003), and one that talked briefly about posttraumatic growth in West Africa (Gregory & Prana, 2013).

Besides, Africa is disproportionately represented in the world's disaster mental health literature (North et al., 2005) although the continent has received its fair share of both terrorist attacks and wars. Thus, this study will investigate posttraumatic growth in refugees residing in Liberia, Africa. Liberia has a large number of former refugees and IDPs who have experienced multiple war-related trauma in their 14-year long civil conflict (Gerdes, 2013). Furthermore, a recent battle with the Ebola virus in 2014 and 2015 plunged the Liberian people into another wave of loss and grief (Jordan, 2015). Mental health practitioners will be well served to understand the factors that cause people to grow despite multiple traumas over a long period of time (Clarke & Borders, 2014; Villalba, 2009; Chung & Bemak, 2006).



Moreover, mental health professionals are ethically bound to help diverse individuals, and this is reflective of the ethical standards of the American Counseling Association (ACA, 2014), the American Psychological Association (APA, 2002), and the National Association of Social Workers (2008). The preamble to the ACA code of ethics states, “counseling is a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals”. Similarly, the preamble of the American Psychological Association focuses on the organization’s respect for and protection of civil and human rights of all individuals (APA, 2002). Likewise, the National Association of Social Workers’ focus is on enhancing human wellbeing, paying attention to empowering people who are vulnerable, oppressed and living in poverty (NASW, 2008). These three major organizations echo the same message in terms of their passion for the wellbeing of vulnerable populations – refugees and internally displaced persons being one of such populations. In addition, because refugees and former refugees come from diverse backgrounds, mental health counselors have to employ their multicultural competence in addressing their needs (Chung & Bemak, 2006; Villalba, 2009). The study under investigation, therefore, provides recommendations to mental health professionals on how to help current refugees prepare for life outside refugee camps (i.e. repatriation, local integration, or resettlement in another country).

The subsequent sections will address the statement of the problem under review, significance of the study, research questions, and a summary of the hypothesized models and ethical considerations of the study.

### Statement of the Problem

According to the United Nations High Commissioner for Refugees (UNHCR), people flee their homes and/or countries because of armed conflict, persecution, natural disasters or sometimes the need for a better life (UNHCR, 2014). In 2015, nearly sixty million people worldwide were displaced due to refugee and migrant situations (UNHCR, 2015). Refugee situations, often resulting from armed conflict, place people at risk for a number of adverse physical consequences including loss of home and property, victimization through rape and murder, and disintegration of family and school systems (McKay, 1998; Poirier, 2012). Recently, an estimated nine million Syrians fled their homes because of a civil war in March 2011 (Syrian Refugees, 2016). Some of these refugees travelled by land to neighboring countries like Turkey, while others went by sea into Europe. Some of those traveling by sea have lost their lives – an estimated 3,695 and counting (Hume & Pawle, 2015). According to a BBC world news report (2016), more than a million migrants and refugees crossed into Europe in 2015. Since then, there has been continued division within the European Union (EU) on how best to solve the problem of resettlement of the migrants and refugees, with the United Kingdom threatening to pull out of the European Union through a referendum.

The adverse physical and mental health consequences of armed conflict prove distressing to people, making them overwhelmed and affecting their natural abilities to cope. A flooding of these adverse consequences makes people vulnerable, leading to an experience of what mental health counselors refer to as “trauma” (Ringel & Brandell, 2012; Tedeschi & Calhoun, 2006).

Trauma is not restricted to a selected few. Between 60 to 80% of adults experience at least one traumatic event in a lifetime (Simiola, Neilson, Thompson, & Cook, 2015). These

traumatic events include natural disaster, interpersonal violence, life-threatening accidents, chronic illness, and war. Even though many who go through these traumatic experiences do not have any long-term negative consequences, between 10 to 50% also report significant various mental health challenges (Friedman, Resick, & Keane, 2016). For example, Dell’Osso and colleagues (2011) report that 37.5% of participants who were earthquake survivors showed the presence of PTSD, with women reporting higher PTSD scores than men.

Research on trauma, a perennial distress of refugees, has been skewed towards pathogenic (disease causing) outcomes such as posttraumatic stress disorder (PTSD; Zerach, Solomon, Cohen, & Ein-Dor, 2013). However, there is an increasing shift from pathogenic to salutogenic (focus on health and wellbeing) perspectives (Antonovsky, 1996; Levine, Laufer, Stein, Hamama-Raz, & Solomon, 2009; Powell, Rosner, Butollo, Tedeschi, & Calhoun, 2003). The salutogenic view of trauma is found within the positive psychology school of thought (Seligman & Csikszentmihalyi, 2000), which posits that a combination of positive subjective experiences, individual traits and institutions can improve quality of life and thwart the negative effects of adversity. Posttraumatic growth (Tedeschi & Calhoun, 1996), religiosity (Pargament, 1997), and optimism (Scheier & Carver, 1985) fall under the umbrella of positive psychology.

The first construct in this study under positive psychology, is posttraumatic growth. The construct was developed by Tedeschi and Calhoun in the mid-1990s, and takes a *salutogenetic* approach to mental health (Tedeschi & Calhoun, 1996; 2004; 2006). The authors defined the construct as a positive psychological change that individuals experience due to highly challenging life circumstances. These positive psychological changes include relating to others, new possibilities about the future, personal strength, spiritual change, and appreciation for life

(Tedeschi & Calhoun, 2004). Posttraumatic growth has been studied in individuals who have experienced loss (Taku, Tedeschi, & Cann, 2015), chronic illnesses (Purc-Stephenson, 2014), sexual assault (Ullman, 2014), natural disasters (Xu & Liao, 2011), and man-made disasters like war (Gregory & Prana, 2013; Levine, et al., 2009; Powell et al., 2003). Results from these studies have collaboratively asserted that positive growth following traumatic experiences is both a process and an outcome.

The second construct in this study under the positive psychology umbrella, religiousness or religiosity, is a noun that has both negative and positive connotations; it can mean an exaggerated piety, as well as religious zeal and devoutness (Hornby, Cowie, & Lewis, 1974). In research, religiousness, religiosity, religious coping, and religious commitment have all been used to describe the plethora of approaches to religious practices that influence positive mental health outcomes (Bentley, Ahmad, & Thoburn, 2014). Religiousness, like spirituality, helps people recover from adverse effects, cope with changes, and promote a deeper understanding of one's purpose in life (Lopez, Camilli, & Noreiga, 2015). Africans, more often than Europeans and Americans, have reported coping with traumatic experiences through religious and social support (North et al., 2005). The African is part of a social group belonging to a society maintained by its religious outlook (Parratt, 1996). Thus, it is natural that the interrelation between religiousness and social support may be used as a coping mechanism.

Optimism, the final construct in this study under positive psychology, is a part of an individual's personality that believes that good things, rather than bad will happen in one's life (Scheier & Carver, 1985; Carver & Scheier, 2009). Optimism is reported to predict subjective wellbeing in both adolescents and middle-aged people (Krok, 2015). There is also evidence of

optimism's correlation with high self-esteem, low negative emotions and well-being indicators among both adolescents and adults (Wrosch & Scheier, 2003). Thus, to identify the presence of posttraumatic growth in a sample of adult former refugees and internally displaced persons in Liberia, the study under investigation set out to examine the influence of war-related trauma, religious commitment, optimism, and posttraumatic growth in adult Liberian former refugees and displaced persons.

### Significance of the Study

There are four arguments that support this study. The first is an increasing concern over refugee issues. Refugees report experiencing various complex mental health problems (UNHCR, 2015; Shannon, Wieling, Simmelink-McCleary, & Becher, 2015). The exodus of any large number of people into another country takes a toll on both the economic and social structure of host countries in particular, and on the international community in general (Rugunanan & Smith, 2011). For example, the crisis in Syria has brought a division in the European Union (BBC, 2016), and concern for Americans and their legislators (Fantz, 2012). Psychologically, war-related experiences produce stress on people's coping mechanisms, a concern that makes the services of mental health counselors indispensable.

Second, because refugees and former refugees are from diverse backgrounds, mental health counselors have to be multiculturally competent to address their needs (Chung & Bemak, 2006; Villalba, 2009). Unfortunately, many helpers may be unaware of the needs of this population, or if they are aware, may not have the skills set to offer services that are culturally sensitive and that address the kind of trauma they have endured. A study on former refugees

may provide answers to their mental health needs and what they would have appreciated in various refugee camps to help the adjustment period (Clarke & Borders, 2014; Meyers, 2016). An understanding of these needs, from their cultural perspective, may increase practitioners' multicultural competencies, while providing insight to help current refugees in their preparation for repatriation or even resettlement.

A third argument for this study is that the majority of refugees remain on the African continent and the Middle East. However, the United Kingdom (UK) and United States of America (US) host about 10% of the refugee population (Foy, 2010). As at the beginning of 2016, over a million people had crossed from Syria to many EU countries, and about 942,400 asylum claims filed. Despite these numbers, there is limited research on refugees, especially, former refugees in Africa (Rugunanan & Smit, 2011). A study about former refugees in Africa will add to the discourse on mental health concerns, specifically in developing countries, especially in terms of the continued discourse on globalization and internationalization of the counseling profession.

The final argument for this study is that we do not know enough about the effects of repatriation on refugees; nor do we know of refugees' needs during repatriation (Das, Dubus, & Silka, 2013). What we do know is that the United Nations High Commissioner for Refugees (UNHCR) recommends repatriation of refugees rather than local integration and resettlement (UNHCR, 2015; Shannon, Wieling, Simmelin, McClearly, & Becher, 2015; Koch, 2014); yet, the mental health repercussions are yet unknown about the repatriation process or the resettling process in a country that was once called "home". An understanding of this navigation process

will inform mental health practitioners in their international work, and in training of international students in their various programs (Chen, Ong, & Brodwin, 2008).

### Theoretical Framework

The present study examines variables situated within two theoretical models. The models are cognitive behavioral theory of trauma (Ehlers & Clark, 2000; Gonzalez-Prendes & Resko, 2012; Ringel & Brandell, 2012), and broaden-and build theory of positive emotions (Fredrickson, 1998) as they relate to the growth from trauma of adult Liberian former refugees and displaced persons.

#### The Cognitive Behavioral Theory of Trauma

The cognitive behavioral theory of trauma asserts that people's thinking patterns of past events and experiences, also known as cognitive processing, play a unique role in how they approach future life situations. Cognitive behavioral theory of trauma is similar to George Kelly's *personal construct theory* (Kelly, 1963) in that both theories purport that a person's behavior is dependent on mental representations (schemas) created from experiences. People's schemas help make sense of the world they live in by helping them to predict and control events as much as possible.

Furthermore, the cognitive behavioral theory of trauma theorizes that people react to traumatic events as if those events still hold threats for them (Ehlers & Clark, 2000; Kelly, 1963). When people go through traumatic experiences (e.g. war and torture), their assumptions about the world (worldviews) become shattered (Tedeschi & Calhoun, 2004). Cognitive processing becomes integral in people's attempt to make sense of the traumatic experience,

rebuild their worldview, and grow after a traumatic experience (Calhoun, Cann, Tedeschi, & McMillan, 2000). A pivotal aspect of cognitive processing is *rumination*, which includes both negative and positive cognitive processing of the event (Calhoun & Tedeschi, 1998). Rumination is repetitive thinking; it can be intrusive or deliberate. Rumination becomes intrusive when repetitive and unwanted thoughts inundate a person's cognitive world. On the other hand, deliberate rumination is attentive reflection that occurs when people are trying to understand or re-examine events (Lindstrom, Cann, Calhoun, & Tedeschi, 2013).

Additionally, cognitive theory of trauma proposes that the cognitive processes that lead to a sense of current threat are normally accompanied by intrusions, avoidance and other re-experiencing symptoms like flashbacks, recurrent pounding of heart, and hypervigilance (American Psychiatric Association [APA], 2013). These perceived threats culminate in both cognitive and behavioral responses meant to ease perceived threat in the short run. In the long run, however, the cognitive and behavioral responses could prevent cognitive change from occurring, thereby maintaining the disorder (Ehlers & Clark, 2000; Rubin, Malkinson, Koren, Yosef, & Witztum, 2012).

Cognitive behavioral theory of trauma has been used as a theoretical lens for studies within traumatized populations (Shirk, DePrince, Cristostomo, & Labus, 2014; Marquett et al., 2013; Webb, Hayes, Grasso, Laurenceau, & Deblinger, 2014). To test the cognitive behavioral theory of trauma in the way humans cognitively process traumatic experiences, Knaevelsrud, Liedel, and Maercker (2010) conducted an experimental study to examine the effect of an internet-based cognitive behavior therapy (CBT) intervention on growth, openness to new experiences, and optimism in adults (18-68 years) in Germany. Participants ( $n = 96$ ) suffering



from posttraumatic stress reactions were randomly assigned to either the treatment or wait-list control condition. The CBT treatment consisted of two-weekly 45-minute writing assignments over a five-week period where participants went through three treatment phases. The three phases consisted of psychoeducation addressing self-confrontation (focus on trauma and write about it), cognitive reconstruction (form new perspectives on the traumatic experience), and social sharing and farewell ritual (symbolic leave of the traumatic event). Consistent with cognitive behaviorists, the participants had to address their schemas in order to help them predict future events.

Results of the study indicated a statistically significant change in posttraumatic growth scores from pre-treatment ( $M = 13.7$ ,  $SD = 4.4$ ) to post-treatment ( $M = 18.8$ ,  $SD = 4.5$ ),  $F = 11.34$ ,  $p < .001$ . However, there was no significant change in openness scores from pre-treatment ( $M = 19.0$ ,  $SD = 4.0$ ) to post-treatment ( $M = 20.0$ ,  $SD = 2.8$ ); and no significant change in optimism scores from pre-treatment ( $M = 10.6$ ,  $SD = 4.5$ ) to post-treatment ( $M = 13.2$ ,  $SD = 4.2$ ). Furthermore, the researchers assessed for moderator-effects of changes in posttraumatic stress reactions to post-treatment posttraumatic growth. Results of this analysis indicated that pre-treatment posttraumatic growth and change in intrusions were related to posttraumatic growth post-treatment. Post-traumatic growth pre-treatment accounted for 13%, and residual gain score of intrusion accounted for 41% of the variance in posttraumatic growth post-treatment. This German study confirmed the connection between cognitive processing and trauma (Tedeschi & Calhoun, 2004). The changes in intrusion that predicted posttraumatic growth at the end of treatment also affirmed the connection between cognitive processing and people's attempts to make sense of traumatic experiences (Calhoun et al., 2000).

Similarly, Shirk and colleagues (2014) conducted a randomized effectiveness trial with adolescents ( $n = 43$ ). The participants, referred for outpatient treatment, suffered from various depressive disorders and history of interpersonal trauma. The researchers used the abbreviated version of the trauma experiences screening interview to determine the presence of prior trauma. Thereafter, using several instruments including the abbreviated version of the child version of the *Traumatic Events Screening Inventory*, participants were taken through a 12-session, 16-week intervention of either modified cognitive behavior therapy (m-CBT) or a randomized control trial with usual care therapy (UC). The m-CBT protocol was adapted by infusing mindfulness-based interventions to target trauma-related cognitions, identified within cognitive behavioral theory of trauma as including intrusions, avoidance and hypervigilance (Rubin et al., 2012).

Results of this study indicated significant reductions in depressive symptoms in both treatment groups. About half the treated adolescents in both groups no longer met diagnostic criteria for any of the depressive symptoms they earlier exhibited, even when the dosage of CBT they received was significantly lower than arranged for study participants. The results of the reduction in depressive symptoms indicated a connection between trauma and cognitive processing.

Likewise, Marquett and colleagues (2013) used a single group pre-post design of individuals suffering from various depressive disorders to identify potential predictors of response to cognitive behavioral therapy in older adults ( $n = 60$ ). Participants received 12 individual sessions of 12-week cognitive behavioral therapy. Using a variety of measures obtained at baseline, the researchers evaluated participants' results using hierarchical regression techniques to predict improvement following the treatment. About 33% of the sample did not

show significant improvement in depression from pre to post treatment. Admittedly, not all people will benefit from cognitive behavioral therapies as a method of intervention for the treatment of trauma and stressor related disorders. Despite the number of people in this study who did not show significant change in symptoms, those who showed greater improvement were less negatively affected by past stressors, more open to new experiences, and more likely to seek emotional support when they perceived the onset of symptoms.

Finally, Webb and his fellow investigators (2014) used trauma-focused behavioral therapy (TF-CBT) in treating traumatic stress within a sample of 7-16 year age group ( $n = 72$ ) with a history of documented trauma and symptoms of PTSD in a community setting. Participants received the TF-CBT for an average of 10 sessions. Both children and their parents were taken through the 90-minute weekly sessions, which was split evenly between children and parents. The *UCLA PTSD Reaction Index DSM-IV* (UPID; Pynoos et al., 1998) measured participants' post-traumatic stress disorder (PTSD) symptom change. Moreover, because of the inclusion of parents, the *Child Behavior Checklist 6-18* (CBCL; Achenbach, 2001) was used to assess changes in children's emotional and behavioral problems. Results of this experiment indicated a symptom change over time in UPID and CBCL scales, with decrease in PTSD symptoms over the first six months, and consistent steady decrease, producing a curvilinear decrease in PTSD symptoms.

Despite the location, type and duration of experiment, age range, as well as the diversity in symptoms, the studies above jointly indicate the efficacy of cognitive behavioral therapy as intervention for people suffering from various stressor related disorders and traumatic experiences. The studies reviewed above are consistent with extensive research on the efficacy of

cognitive behavioral therapies in treating various trauma and stressor-related disorders (APA, 2013; Monson & Shnaider, 2014). Thus, it is hypothesized that Liberian former refugees who still encounter intrusions, avoidance and other re-experiencing symptoms of the trauma, and who cognitively process current events as if the traumatic events of the war still hold threats for them will have high scores on the post-traumatic stress disorder checklist.

**H<sub>01</sub>:** There will be a relationship between impact of event as measured by the *War Trauma Screening Index* (WTI; Layne, Stuvland, Satzman, Djapo, & Pynoose, 1999) scores and posttraumatic stress disorder scores as measured by the *Posttraumatic Stress Disorder Checklist-5* (PCL-5; Weathers, Litz, Keane, Palmieri, Marx, & Shnurr, 2013).

#### Broaden-and-Build Theory of Positive Emotions

Whereas cognitive behavioral theory of trauma involves mental processing of negative events, the broaden-and-build theory of positive emotions proposes that positive emotions lead to a broader selection of thoughts and actions that help build resources, in turn helping future survival and successes (Fredrickson, 1998). What happens in the process is that people who commonly focus on positive emotions make way for brain activities that enhance an expansion of thought-action reserves. Thus, when adversity occurs, people who focus on positive emotions have the ability to bounce back as they use the skills and resources in their reserve (Fredrickson, 2001; Mangelsdorf & Eid, 2015).

The broaden-and-build theory of positive emotions consists of two hypotheses – the broaden hypothesis, and the build hypothesis. The “broaden” hypothesis enables individuals to increase their repertoire of options for life events, while the “build” hypothesis allows people to use these options for positive outcomes in the face of new challenging circumstances

(Fredrickson, 1998). The “broaden” hypothesis further focuses on ways that people change when they experience positive emotions – thus the short term, while the “build” hypothesis focuses on the lasting changes that follow repeated positive emotional experiences over time – the long term. In effect, people have the ability to grow from great experiences as they do from traumatic experiences (Mangelsdorf & Eid, 2015).

Catalino, Algoe, and Fredrickson (2014) used positive emotions as a theoretical foundation to hypothesize that the pursuit of happiness in making positivity a priority in life could predict better well-being. The investigators tested whether prioritizing positivity could reduce depressive symptoms and increase various well-being outcomes. Using a sample of young adults ( $n = 233$ ), the researchers developed a measure to identify how people seek out positive emotional experiences when making decisions about life. With the help of other positivity measures (e.g. valuing happiness, differential emotions scale, ego resilience, self-compassion, etc.), the investigators conducted regression analyses to identify which positivity priority predicted four markers of well-being.

The results of this study indicated that prioritizing positivity positively correlated with constructive aspects of well-being, and inversely related with negative aspects of wellbeing. Furthermore, prioritizing positivity significantly predicted higher self-compassion, resilience, mindfulness, and positive relations with others, but not fewer illness symptoms. Moreover, prioritizing positivity significantly predicted more positive emotions ( $\beta = 0.44$ ,  $b = 0.22$ ,  $p < .001$ ). The researchers cautioned that when people pursue happiness and relate their happiness in an obsessive way, happiness would decline. Nevertheless, seeking happiness is not inherently

self-defeating; like any art, it is delicate and could be a worthwhile pursuit to embark on to help individuals expand their decision-making cognitions.

Within a trauma-based population of African American ( $n = 299$ ) and European American ( $n = 209$ ) volunteers, Ai and colleagues (2011) studied risk and protective factors for acquiring PTSD, three months after Hurricanes Katrina and Rita. Results from this study indicated that previous trauma recollections predicted symptoms among European Americans but not their African American counterparts. On the other hand, disaster-related stressors affected African Americans more than they affected their European American counterparts. Positive emotions and hope mediated the effect of negative outcomes on emotions for African Americans. Hope ( $\beta = -0.20, p < .05$ ) predicted lower levels of PTSD symptoms, with overall model being significant ( $F = 4.21, R^2 = .31, p < .001$ ), and explaining 31% of the variance in PTSD symptoms among African Americans. Despite the racial differences in PTSD predictors between European Americans and African Americans, the study confirmed findings from other studies on the mediating role of positive emotions on the negative effects of trauma (Catalino et al., 2004; Sandel, 2007).

Moreover, Sandel (2007) carried out a survey research using the broaden-and-build theory (Fredrickson, 1998) to examine the effects of trauma exposure, emotional intelligence, and positive emotions within resilience. Using several instruments similar to those used by Catalino and colleagues (2014), for her adult participants ( $n = 64$ ), Sandel conducted correlational analysis. The results of the study indicated that resilience and positive emotion were significantly related ( $r = .64, p \leq .01$ ). Furthermore, resilience and all four factors of emotional intelligence (appraisal of emotion, utilization of emotion, emotion regulation, and embracing

emotion) were significantly positively correlated. Despite the small sample size, making it difficult to generalize, Sandel contributed to the literature on positive emotions with results indicating that positive emotion was a significant predictor of resilience.

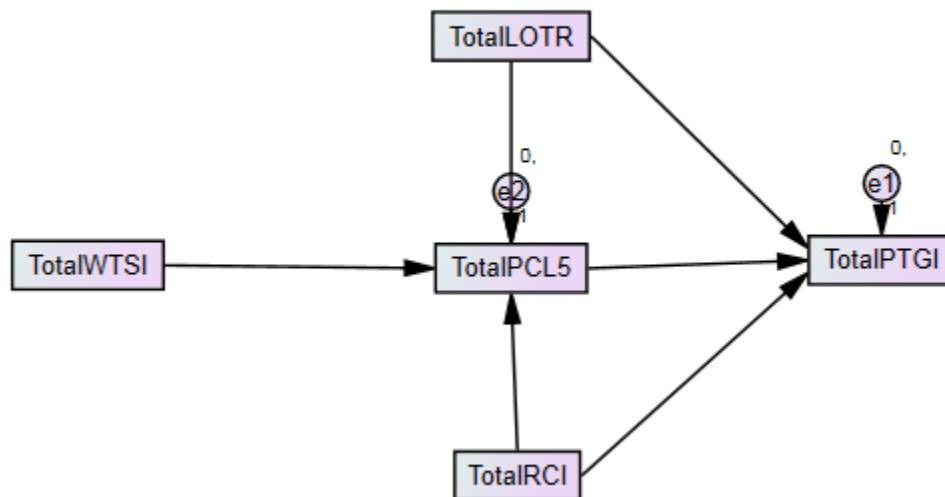
Based on the studies reviewed above, identifying aspects of positive psychology that adult Liberian former refugees and displaced persons have cognitively processed and incorporated into their schema will inform literature on therapies and interventions for this population and other populations that share similar characteristics (i.e. traumatized from war-related events). Thus, it is hypothesized that Liberian former refugees who are able to use positive emotions, will have higher posttraumatic growth scores, higher religious commitment scores, higher optimism scores, and lower PTSD scores.

**H<sub>0</sub>2:** Adult Liberian former refugees and IDPs who use positive emotions in processing their war-related experiences will have high posttraumatic growth scores (as measured by the PTGI, Tedeschi & Calhoun, 1996) and low posttraumatic stress disorder scores (as measured by the PCL-5, Weathers et al., 2013).

**H<sub>0</sub>3:** Adult Liberian former refugees and IDPs who use positive emotions in processing their war-related experiences will have high religious commitment scores (as measured by the Religious Commitment Inventory [RCI-10, Worthington et al., 2003]) and low posttraumatic stress scores (as measured by PCL-5, Weathers et al., 2013).

**H<sub>0</sub>4:** Adult Liberian former refugees and IDPs who use positive emotions in processing their war-related experiences will have high optimism scores (as measured by the Revised Life Orientation Test [LOT-R, Scheier, Carver, & Bridges, 1994]) and low posttraumatic stress scores (as measured by PCL-5, Weathers et al., 2013).

Posttraumatic growth is a process that unfolds gradually over a period following accommodation to new trauma-related factors because traumatic events generally require massive schematic changes. However, it is possible that after a period since the end of a traumatic event, (e.g. after decades), positive changes decrease (Calhoun et al., 2000). Thus, posttraumatic growth will be explored in participants based on the length of time since repatriation. The hypothesized path model is indicated in Figure 1 below.



**Figure 1: Hypothesized Path Model of Hypotheses**

Thus, according to the hypotheses, war-related trauma will be associated with posttraumatic stress disorder. Posttraumatic stress disorder alone will be associated with posttraumatic growth, and when religious commitment and optimism affect posttraumatic stress, the associated posttraumatic growth scores will be higher than the associated posttraumatic stress



correlation scores. The hypotheses drawn from the theoretical framework will be addressed in depth in the methodology, analyses, and discussion sections.

## **CHAPTER TWO: REVIEW OF RELATED LITERATURE**

The purpose of this literature review is to serve as a sample to represent the specific constructs of interest in the study (i.e. trauma, posttraumatic growth, religious commitment, and optimism), as they apply to refugees, former refugees, immigrants, and displaced persons. The population under discussion has undergone cataclysmic life events, similar and somewhat different from those experienced by people dealing with chronic and debilitating illnesses, military personnel, and survivors of death of loved ones. However, to be succinct, literature reviewed focused on the constructs under study within refugee, former refugee, displaced people, and immigrant populations. Literature on survivors of natural disasters are addressed only briefly because, although natural disasters are classified as traumatic, these experiences have dissimilar undesirable consequences as compared to traumatic events caused by humans (e.g. wars, interpersonal violence, etc.) (Vázquez, Cervellón, Pérez-Sales, Vidales, & Gaborit, 2005).

To enable a comprehensive search, the researcher used ten databases – Educational Full Text, Eric EBSCOhost, Medline EBSCOhost, Science Direct, Academic Search Premier, Sage Premier, Springer Link, Web of Science, PsycInfo, and, Dissertation and Theses Full Text. The search terms used were posttraumatic growth, (optimism OR hope OR religion OR faith OR religiosity OR religious commitment OR attitudes), and (refugees OR “boat people” OR “displaced persons” OR immigrants). Studies that fell outside the scope of the search terms, but had information necessary for a global understanding of the review were mentioned briefly to situate the current study within a universal perspective. Thus, results of these searches were reviewed under the following sub-topics:

- (1) posttraumatic growth,

- (2) similarities and differences between resilience and posttraumatic growth,
- (3) brief history of Liberia,
- (4) international law on war and conflict,
- (5) United Nations, international law, and refugees,
- (6) refugee status under international law,
- (7) trauma,
- (8) how PTSD develops,
- (9) refugee trauma,
- (10) posttraumatic growth in refugee and war-related research,
- (11) religiousness,
- (12) the place of religiousness or religious commitment in trauma,
- (13) optimism within traumatized populations,
- (14) definition of optimism,
- (15) how traumatized people use optimism to heal,
- (16) a connection among posttraumatic growth, religiousness, and optimism within traumatized populations, and
- (17) summary.

### Posttraumatic growth

Posttraumatic growth is a construct developed by Tedeschi and Calhoun in the early 1990s. The construct takes a *salutogenetic* approach to mental health (Tedeschi & Calhoun, 1996). The authors defined the construct broadly as a positive psychological change that

individuals experience due to highly challenging life circumstances. Posttraumatic growth refers to the positive changes people report obtaining after a cataclysmic event; benefits that culminate in more well-being and meaning making, and cause a positive transformation (Tedeschi & Calhoun, 1996). Thus, posttraumatic growth “requires a precipitation of ‘seismic’ disruption to one’s assumptive world or sense of self” (Davis, Wohl, & Verberg, 2007; p. 695). This geological metaphor presupposes that the basic philosophy and *raison d’être* of an individual must have encountered a “shaking” for posttraumatic growth to occur.

Nevertheless, the construct does not presuppose that any traumatic experience will lead to an automatic growth consequence (Calhoun & Tedeschi, 2004). Internal conflicts do occur, and the conflicts are cognitively processed through ruminative activity and meaning making, especially in situations where foundational views have been shattered (Tedeschi & Calhoun, 2004). People generally have beliefs about the world and their connection with it. Traumatic events have the power to shatter these beliefs, leaving people in a state of re-examination vis-à-vis their experiences. This reexamination has often been referred to as “rumination,” “cognitive processing,” and “cognitive engagement” (Tedeschi, Calhoun, & Cann, 2007; p. 398). The re-examination that leads to growth beyond the pre-trauma state is posttraumatic growth (Tedeschi & Calhoun, 1996; 2004; Tedeschi et al., 2007). The benefits in posttraumatic growth permeate specific aspects of human functioning – positive changes in interpersonal relationships, more meaning in life, more spiritual depth, appreciation for life, personal strengths, and openness for new possibilities (Tedeschi & Calhoun, 1996; Powell, Rosner, Butollo, Tedeschi, & Calhoun, 2003) – dimensions which constitute the five factors related to the construct. Thus, the PTG construct is divided into three categories namely self, relation with others, and change in

philosophy. A factor analysis of these three categories produced five dimensions on the posttraumatic growth inventory (PTGI, Tedeschi & Calhoun, 1996). The dimensions are (a) improved relations with others, (b) increased personal strength, (c) identification of new possibilities, (d) positive spiritual change, and (e) increased appreciation of life.

Similar to Tedeschi and Calhoun, other researchers believe that traumatic events can lead to personal change. These researchers however use terms such as “stress-related growth” (Park, Cohen, & Murch, 1996), “adversarial growth” (Joseph & Linley, 2005), or “benefit-finding” (Affleck & Tennen, 1996) to describe the growth that occurs in people after they experience traumatic events. According to these researchers, highly stressful experiences can be a catalyst towards meaning making and growth. Tedeschi and colleagues however caution current and future researchers not to equate growth with “resource gain” until clear evidence is provided to link the two in a meaningful way (Hobfoll, Canetti-Nisim, & Johnson, 2006; Hobfoll, Tracy, & Galea, 2006; Tedeschi et al., 2007).

Shakespeare-Finch and Barrington (2012) corroborate earlier research and add that behavioral change due to posttraumatic growth is evidenced by changes in career path, spending more time with family and friends, and increased appreciation for the spiritual and religious. When people experience posttraumatic growth, they move beyond mere survival and obtain more cognitive awareness and emotional adjustment (Barrington & Shakespeare-Finch, 2013; Tedeschi & Calhoun, 2004). Due to the emotional adjustment aspect of posttraumatic growth, the construct connects appropriately with the broaden-and-build theory of positive emotions (Fredrickson, 1988). The theory avers that people growing from adversity use emotional regulation to find a plethora of options to use in the future, and in using these options, to grow

into stronger people, beyond their original level of functioning (Fredrickson, 2001; Tedeschi & Calhoun, 2004).

In the parlance of cognitive theorists (e.g. Meichenbaum, Beck), Tedeschi and Calhoun explain that personal growth is contingent on satisfactory completion of a schema reconstruction process – a process of meaning-making. Being both a process and an outcome, posttraumatic growth aims to foster the intentional processing of trauma both cognitively and communicatively to manage the adverse psychological repercussion of trauma (Gregory & Prana, 2013). The role of any helper intent on fostering posttraumatic growth is that of a companion more and not an expert (Kelly, 1977). The proponents of the posttraumatic growth (PTG) do not propose that individuals rebuild fundamental beliefs destroyed by the trauma. Rather, individuals develop a new set of assumptions that incorporate the changes from the trauma, as well as being congruent to the individual's personhood (Tedeschi & Calhoun, 1996).

To identify the latent factors of posttraumatic stress and posttraumatic growth, Birkeland and colleagues (2014) examined the relationship between posttraumatic stress and posttraumatic growth in a group of government (ministerial) workers after a terrorist bombing attack in Norway ( $n = 1970$ ). The writers combined four clusters of posttraumatic stress and the five domains within posttraumatic growth, and with the help of a structural equation modeling, extracted three classes of individual reactions. The first class, “high stress/high growth,” explained people who had high posttraumatic stress as well as high posttraumatic growth, confirming that people who scored high on posttraumatic stress disorder scales could also score high on posttraumatic growth. The second class comprised “low stress/high growth,” referring to people whose score on posttraumatic stress scale was low but who had high scores on

posttraumatic growth scores. The final group, “low stress/low growth,” referred to people whose posttraumatic stress scores were as low as their posttraumatic growth scores. In all cases, there were two groups of people – those who were physically close to the bombing and those who were not.

The findings from this study add to the literature on adversarial growth in showing that people with low degrees of posttraumatic stress could also experience high posttraumatic growth. High posttraumatic growth in this study was associated with being female; high posttraumatic growth was also associated with higher degree of neuroticism. Optimism was not associated with any of the classes extracted. Despite the immense contribution of all these investigators to the posttraumatic growth literature, there is limited exploration of the construct to non-US cultures (Shakespeare-Finch & Copping, 2007).

To address the limitation of the US-concentrated studies, Shakespeare-Finch and Copping (2007) undertook a grounded theory from another continent. The researchers undertook a grounded theory methodology with 15 undergraduate students in Australia. Results from the analysis largely supported the original PTG model. However, contrary to the PTG model, acceptance was part of the themes identified in the analysis. In the original PTG model, acceptance was viewed as a precursor to growth, whereas in the Australian study, acceptance was an outcome of growth. Further, four overarching dimensions of the PTG were found – personal strength, effortful reinvention of self, focus on life’s positives, and compassion.

The personal strength dimension branched out into “self as survivor,” “independence,” and “self-efficacy/coping.” The personal dimension of the Australian sample was similar to that of the US sample. Thus, the personal dimension on the PTG scale transcends cultures. The

universal dimension within the Australian sample was “effortful reinvention,” which comprised change in one’s attitude, eliminating negatives, fostering positives and new possibilities, and respect for self. However, a dimension that was found in the Australian sample but not evident in the US sample was an “expansive compassion dimension” (Taku & Cann, 2014).

The difference in philosophy on compassion speaks more to personal strength than relating to others, as evidenced by compassion loading strongly on the “appreciation of life” rather than “relating to others” factor in an exploratory factor analysis (Morris, Shakespeare-Finch, Rieck, & Newbery, 2005). Whereas the US sample focused on relationship with others, the Australian sample identified “respect for self” as an outcome of the trauma. Thus, this dimension could be a cultural addition to the PTG construct. The final dimension focused on an appreciation of what life offers regardless of the negative experiences. Thus, the Australian sample, like the US sample, focused on using the seemingly little blessings of life to grow from traumatic experiences.

What makes the study of posttraumatic growth complex is the involvement of several constructs, which need further clarification themselves before posttraumatic growth can be fully understood (Johnson et al., 2007). The current study, therefore, will be an addition to the discourse on cross-cultural aspects of posttraumatic growth, especially in populations that have endured traumatic experiences beyond everyday normal adversities.

### Similarities and Differences between Resilience and Posttraumatic Growth

Like resilience, posttraumatic growth addresses positive changes in the face of adversity. Whereas resilience is explained as “bouncing back,” posttraumatic growth is explained as “bouncing forward” (Johnson et al., 2007). It is very possible, therefore for someone to move



forward and backward, thus making it possible for resilience and posttraumatic growth to co-occur. It is also possible for resilient outcomes to make ineffective the need for posttraumatic growth because people with resilient traits may not experience the same crushed worldviews and therefore the need for meaning making, as those who are non-resilient (Levine et al., 2009; Johnson et al., 2007). Furthermore, some researchers are certain that resilience will lead to posttraumatic growth (Tan, 2013), while others believe the two constructs are different (Levine et al., 2009). All these confirm the complex nature of posttraumatic growth.

In a study with almost three thousand ( $N = 2903$ ) adolescents, Levine and colleagues (2009) identified differences between resilience and posttraumatic growth as it applied to Israeli adolescents who had experienced varied levels of terror exposure. The results of the study showed that least posttraumatic growth was associated with most resilience. In addition, most resilience was inversely related to posttraumatic stress symptoms. The researchers explained that since resilience involves a broad range of personal characteristics that help people manage despite trauma, they might not go through the meaning-making that is associated with posttraumatic growth. Unlike resilience, which is a trait that helps people perceive threats as non-threatening to self or worldviews, posttraumatic growth occurs when people make meaning from traumatic events and attribute positive implications from what occurred. Some authors assert that posttraumatic growth is just wishful thinking – an illusion of positivity (Johnson et al., 2007), and that resilient individuals retain equilibrium and therefore need not resort to “unrealistic optimism.” Tedeschi and Calhoun however rebutted this assertion (Hobfoll, Canetti-Nisim, & Johnson, 2006; Hobfoll, Tracy, & Galea, 2006; Tedeschi et al., 2007).

Nonetheless, those who pursue posttraumatic growth on a cognitive level do so hoping to attribute some positive meaning to the experience. Hence, this study uses the construct “posttraumatic growth” to identify which factors within this population are attributable to the positive functionality after the traumatic war experiences of Liberian former refugees. Some former refugees and displaced persons may have lost homes, loved ones or even limbs (misshapen), but may still exhibit optimistic characteristics. Understanding what makes people persist in the face of obvious losses will inform mental health counselors on interventions to incorporate in working with current refugees as they prepare for repatriation, resettlement or local integration.

The next section provides an overview of the history of Liberia, and why people in this country in West Africa are a source of interest for this study. Additionally, Liberia’s history will be connected with international law related to the Liberian civil war, and how this informs our understanding of refugees and displaced persons.

### On Liberia

#### Brief History of Liberia

In the 1820s, the United States of America abolished slave trade and resettled freed slaves in Liberia (Douglass-Chin, 2010; Bøås, 2005). Consistent with what the abolitionists wanted the land to signify, the colony’s white governors who worked for the American Colonization Society chose the name “Liberia” from the Latin word *liber*, which means “free” (Kazanjian, 2011; Dennis, 2005; McPherson, 1891). Further confirmation of this freedom is found on the national seal of Liberia, which has the motto, “the love of liberty brought us here.”

Liberia was not a desolate land; indigenous people inhabited the land prior to the arrival of the freed slaves. Historians surmise that if current legal and ethical lenses were used to judge the process wherewith these freed slaves were deposited on the land, the process would be found sub-par (Kazanjian, 2011; Dennis, 2005; McPherson, 1891). This notwithstanding, Liberia still has close ties with the United States (for an in-depth explanation of this relationship as well as the civil war in Liberia, see Gerdes, 2013); ties that are similar and yet different from those shared between former colonies in Africa and their colonial masters (e.g. Ghana with Britain, Côte d'Ivoire with France; Douglass-Chin, 2010).

#### Trajectory of the Liberian Civil War

The Truth and Reconciliation Committee Reports (TRC, Verdier et al., 2008) categorize the root causes of the Liberian conflict into three generic sections. The report establishes the social, cultural, and political antecedents that affected these sections. The first section was from 1822 – 1847 encompassing the period of the settling of the freed black slaves from US. The second section extends from 1847 to 1989 where the freed slaves were in charge of making policies for Liberia through authoritarianism and state repression. In this period, there was also the development of a system of constitutional subversion and political violence. The third section spans 1990 to 2003 during the period of the full blown conflict in Liberia.

Initial conflict between Americo-Liberians and the 16 ethno-linguistic settlers arose due to misconceptions and fears from both sides of the divide; in a way, these misconceptions and fears are not different from what citizens experience when they hear their borders are open to refugees. The 1822-1947 conflict was on 'uneven footing' because of the backing of the US government of the Americo-Liberians. Thus, in 1822, the US Navy Captain Robert Stockton, at

gun point, took land for the first settlement from the Dei Paramount Chief of Cape Mesurado, King Peter. The relationship between the indigenous Liberians and black settlers was hostile from the very beginning, setting the stage for dissention (Verdier et al., 2008).

Despite the periods of calm in the relationship, the attainment of independence by Liberia in 1847 excavated submerged tensions. When Liberia became a 'new' state, it became necessary to create systems that go with nation-dom. The new state could not assert authority over majority of the peoples because the decision to become a state was not gained through a consensus. There were thus several violent conflicts in the new state until President Tubman provided some profound measures to ensure unity among all Liberians. Despite the relative calm, this unity further laid the structural foundation for national chaos and violent conflicts between 1979 to 2003 (Gerdes, 2013; Verdier et al., 2008).

According to the TRC report, the armed conflict affected men and women differently. Men accounted for nearly 50% of all reported violations compared to 33% of women. Women are reported to have suffered more than 70% of all sexual-based violations. Children were illegally recruited to take part in hostilities. The children also became victim-perpetrators and witnesses, compounding the traumatic experiences during the war. Even though the country is still embarking on rebuilding destroyed infrastructure, little has been done to rebuild the mental health of the people and the country (Verdier et al., 2008).

### Liberia Post-War

Liberia is a country considered a nation of refugees. After surviving over a decade (from the late 1980s to the early 2000s) of war, ethnically-infused civil conflict, and political unrest, the country at one point held as many as 700,000 war refugees, with 65,000 seeking refuge in

other West African countries (US Department of State, nd). As a fledgling society with a tenuous socio-economic environment, it is gradually rebuilding from the destruction of the war (Gerdes, 2013). However, the influx of refugees continued when, more recently, Liberia became host for over 12,000 refugees from Côte d'Ivoire (Ivory Coast) fleeing their own tribal and civil conflict (UNHCR, 2015).

By the middle of 2014, Liberia began experiencing another form of war and trauma – the Ebola virus (Diagne, 2014), an invisible war that has recently reared its head again (Douceff, 2015). Despite the experience of long-term and multiple traumatic events, these former refugees and displaced persons, citizens of Liberia, still thrive. What accounts for this growth despite the multiple complex and continuing traumas? Before finding answers for the source of growth in spite of adversity for this population, an exposition of the international law on war and conflict is necessary to understand the paths that many Liberians had to travel to arrive at their current destination.

### International Law on War and Conflict

International law is a body of rules governing relations between countries; these rules consist of practices considered by the countries as legally binding. Within international law is the “International Humanitarian Law” contained in the four Geneva Conventions of 1949.

International humanitarian law, also known as the “law of war” or the “law of armed conflict,” is a set of rules set out to mitigate the effects of armed conflict. For humanitarian reasons, the international humanitarian law seeks to restrict the means and methods of warfare in order to protect people caught amidst conflict (Geneva Academy, 2015). The international humanitarian

law further prohibits the use of certain weapons and military tactics, and protects certain categories of people and goods. While the international humanitarian law is applicable in armed conflict where at least two countries are involved, it does not cover countries' internal tensions or disturbances (see in-depth explanation in [www.geneva-academy.ch/RULAC/international\\_humanitarian\\_law.php](http://www.geneva-academy.ch/RULAC/international_humanitarian_law.php)).

The law of armed conflict, divided in two categories, comprises (a) legitimate reasons to start a war (right to wage war), and (b) limits to acceptable wartime conduct. At the onset of armed conflict, international humanitarian laws begin to apply. These humanitarian laws make provision for a valid military purpose for attack as well as the avoidance of killing non-combatants. However, the law makes room for non-combatants killing only in proportion to military necessity of attack. The grey area occurs in deciphering the “proportionality” clause in killing non-combatants. Thus, people have to flee their homes to protect their lives due to the grey areas in the humanitarian laws – a journey that categorizes them as “refugees” or “internally displaced persons (IDPs).”

#### United Nations, International Law and Refugees

Refugees are people who are unable to avail themselves to the protection of their own country; this is because they have well-founded fear of being persecuted for their race, religion, nationality, and/or association with a particular social or political leanings. As a result, they have no option but to stay outside the borders of their country (United Nations Refugees Act no. 130 of 1998; Naldi & D’Orsi, 2014; Omata, 2014). The African Union felt the United Nations’ (UN) definition was limited. The organization therefore broadened the definition in lieu of the peculiar case of African countries in their fight for national liberation and against apartheid, drought and

famine. The broadened definition incorporated the idea of people who flee due to external aggression, occupation, foreign domination or any events that disturb public order in parts or all of their country (Doebbler v. Sudan, Comm. No. 235; 131; African Charter on the Rights and Welfare of the Child, art. 23(4), adopted July 1, 1990).

Furthermore, under international law, the protection of refugees is characterized by the principles of humanitarian considerations and state sovereignty (Naldi & D'Orsi, 2014). International law allows countries the right to grant asylum, albeit on a temporary basis. However, as Naldi and D'Orsi (2014) explain, fear related to the strain on resources and infrastructure determine governments' willingness or lack thereof in allowing refugees entry into their countries, an assertion confirmed by Rugunanan and Smit (2011) in their study on Congolese and Burundian refugees in South Africa. Thus, countries' preparation to receive refugees seems to provide the initial inkling to these traumatized people that they are an unwanted burden to host countries.

Internally displaced persons (IDPs) encounter similar experiences as refugees. However, the difference between the two groups is that whereas refugees leave the borders of their country, IDPs stay within the borders of the country. The UNHCR provides aid for refugees under the United Nations Refugee Act; however, the act does not make provision for IDPs. Because of the limited resources of UNHCR, the organization is unable to help IDPs in an organized way as they do refugees; other humanitarian organizations sometimes come on board to supply food and clothing for IDPs. Thus, even though both groups may encounter traumatic experiences, IDPs' experiences are compounded by the lack of security and protection provided by the international law of war and refugees (Naldi & D'Orsi, 2014; Omata, 2014; Powell et al., 2003).

## Refugee Status under International Law

The *1951 Convention* relating to the status of refugees and the *1967 Protocol* are international regulations on the protection of refugees (Jastram & Achiron, 2001). These documents cover three main areas of refugee protection: (a) definition, terms for cessation and exclusion; (b) legal status of refugees in country of asylum, rights and obligations, and protection against forcible return; and (c) countries' obligations to the Convention. Refugee law, according to the *Handbook of Refugee Protection* (Jastram & Achiron, 2001) is closely linked to humanitarian law because many refugees find themselves in the middle of international or internal armed conflict. Therefore, international humanitarian law posits that victims of armed conflict – displaced or not – should be *respected, protected against the effects of war, and given impartial assistance* (Rugunanan & Smit, 2011).

The UN therefore mandates the United Nations High Commissioner for Refugees (UNHCR), a non-political organization, to protect refugees as well as help find solutions to their plight. The UNHCR was founded in 1950 and has offices in nearly 120 countries. Internationally, UNHCR promotes international refugee agreements and ensures that governments comply with international refugee law. Even though there was no provision in the handbook for internally displaced people, because many of the displacement cases are often linked with flight related to those of refugees, UNHCR is treating internally displaced people with the same accommodation as refugees. However, UNHCR provides help only if some criteria are met, including access to affected population, adequate resources and capacity, request or authorization from the General Assembly or other competent principal organ of the UN.



Furthermore, the help offered by UNHCR provides three options at the cessation of refugee status, (Omata, 2013; 2014). The first is voluntary repatriation. The convention recognizes that the best solution to the plight of refugees is to return to their home country. Moreover, many refugees have been known to seek asylum near their home countries so they can return at the best possible opportunity to rebuild their communities. Voluntary repatriation however, has to occur under conditions of dignity and safety, and should be based on informed decision by the refugee himself or herself. The convention admits that though this situation is ideal, these processes are far from the reality.

The second option, local integration, occurs when refugees are allowed to stay permanently in the country in which they first sought asylum. For example, Omata (2013) explains that the Ghanaian government, in the 1990s, responded to the influx of displaced Liberians in Ghana by founding a refugee camp in Buduburam, a village 35 kilometers west of the capital, Accra. Even though the UNHCR, upon cessation of war in Liberia organized a large-scale repatriation program for Liberians, about 27,000 remained in Ghana, making Ghana host to the largest number of refugees in the world in 2007. Thus, had the remaining Liberians in Ghana not refused, the UNHCR would have embarked on local integration where Liberians would have been given a place of their own in Ghana to settle (Omata, 2013).

In the third option, the UN convention provides an avenue for resettlement to a second country of asylum. Only a small number of refugees are resettled if that option is deemed the only durable solution for them. UNHCR has criteria that refugees must satisfy before they are resettled to a second country. When they are at risk in their country of first asylum or there is no other durable solution to their plight, UNHCR then resettles refugees in a third country (the first

being the country of flight, the second, being the country of first refuge seeking, and the third being the new place of resettlement).

With this understanding of refugees in place, because of the traumatic experiences war-related refugees encounter, the reader needs to understand the processes and outcome of trauma. Understanding trauma's effect on refugees will help readers appreciate the need for this study. The next subtopic will therefore address trauma and how researchers and clinicians identify it, including the domains that trauma affect.

### Trauma

Trauma is any profoundly distressing physical, psychological and/or existential experience beyond what people generally endure (American Psychiatric Association [APA], 2013; Ball & Stein, 2012; Beck & Sloan, 2012). Navigating traumatic events is an integral part of human experiences (e.g. illness, death, accidents, pain; Beck & Sloan, 2012). Traumatic experiences could involve war, chronic illness, sexual assault, natural disasters, and violent crime. Traumatic experiences push many beyond their normal coping mechanisms and produce in them acute negative reactions (Ball & Stein, 2012). Other people experience a more intense and enduring psychological syndrome known as the posttraumatic stress disorder (PTSD; APA, 2013; Ball & Stein, 2012).

### How PTSD develops

Researchers identify that there is no one underlying cause of PTSD (Coughe, Kilpatrick, & Resnick, 2012). Trauma-related research indicates, however, that PTSD could be caused by learning theory, information processing, biological conditions related to extreme stress, as well

as genetic make-up. Prior to the late 1970s, research on trauma focused on war-related events, particularly, within the US military population (Kroo & Nagy, 2011). Service members who had negative reactions to combat were seen as weak, whereas those who showed no reaction were deemed strong and healthy (Beck & Sloan, 2012). Continued research has indicated, that it is normal to react negatively to traumatic events; when these negative reactions prolong, PTSD occurs and therefore the need for diagnosis and treatment (APA, 2013).

In the trauma literature, PTSD was officially introduced as a psychiatric diagnosis in the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III; APA, 1980). The current DSM (DSM-5; APA, 2013) provides certain criteria for diagnosing PTSD in adults, adolescents and children older than six years. Criterion A for PTSD defines the qualifying trauma, which includes exposure to actual or threatened death (or serious injury, or sexual violence), either directly or witnessing it in a close family member or friend, or learning that a traumatic event happened to a close family member or friend. Criterion A also includes repeated or extreme exposure to aversive details of the traumatic event(s) (e.g. first responders).

When first responders experience posttraumatic stress symptoms, their symptoms fall under “vicarious trauma” (Moulden & Firestone, 2007). It makes sense that counselors who deal with survivors of traumatic experiences may also experience vicarious traumatization (Deville, Wright, & Varker, 2009).

Vicarious trauma is accumulative trauma that affects therapists working with individuals who have encountered traumatic life experiences (Pearlman & Saakvitne, 1995). Counselors who endure vicarious trauma exhibit symptoms identical to PTSD symptoms (e.g. avoidance, intrusion, and arousal; APA, 2013). The said symptoms often affect counselors in their initial

roles as therapists (Barrington & Shakespeare-Finch, 2013). Secondary traumatic stress and compassion fatigue are phenomena used interchangeably with vicarious trauma (Devilly et al., 2009).

Devilly and colleagues conducted a qualitative study with 152 mental health professionals in Australia. Results of this study indicated a moderately high correlation ( $r = .49$ ,  $p < .01$ ) between secondary traumatic stress and vicarious trauma. Both secondary traumatic stress and vicarious trauma correlated highly with affective distress, an indication of a strong convergence between the constructs. A history of primary trauma, which had earlier been hypothesized to correlate highly with vicarious trauma, was rejected for lack of empirical support. Work stress or work load correlated inconsistently with secondary traumatic stress, demonstrating that it was not a given that therapists with voluminous workload would experience secondary traumatic stress. An addition to the literature on vicarious trauma, the results of this study attested that secondary traumatic stress, vicarious trauma, and burnout, though convergent constructs, do not all display construct validity, except burnout. Secondary traumatic stress and vicarious trauma measured the same phenomenon. Burnout and being new to the mental health profession were best predictors of therapist distress.

Generally, people exposed to aversive traumatic event(s) exhibit signs and symptoms found in PTSD, which include intrusive and recurring memories, often involuntary. Others have recurrent dreams or nightmares of the event, while others tend to avoid anything that remotely resembles or bring to memory the traumatic event(s). Some may also have flashbacks, a situation where they have reactions as if the event is occurring all over again, irritability, sleeplessness and hypervigilance.

War-related experiences, similar to what Liberian former refugees and displaced persons experienced, fall within the classification of traumatic experiences. People who have endured the horrors of war are expected to show signs and symptoms of PTSD (APA, 2013; Morina, van Emmerik, Andrews & Brewin, 2014). However, research indicates that others have shown little or no symptoms associated with PTSD (Jayasuriya, 2014; Peddle, 2007; Powell et al., 2003) and are able to function as healthily as possible. The current study will explore how Liberian former refugees, traumatized by war-related experiences, have navigated the trauma process towards growth or deterioration. The subsequent topics will address some of the challenges refugees and IDPs encounter.

### Refugee Trauma

Refugee trauma is identified as a collective phenomenon (Hussain & Bhushan, 2011; Powell et al., 2003). Females report significantly higher scores on traumatic experiences, than their male counterparts (Hussain & Bhushan, 2011; Powell et al., 2003) even though males report more frequent exposure to traumatic events than do females. The gender differences are similar in adult samples as in adolescent samples (Fazel et al., 2012). The reason for this difference can be traced to the cognitive model of trauma which explains the gender differences in the way events are cognitively processed, as well as schemas associated with self and worldviews (Tedeschi & Calhoun, 2004). It has also been suggested that women, more than men, are more likely to perceive threat, loss of control, and experience severe biological and psychological responses to trauma, leading to high prevalence rate of PTSD (Hussain & Bhushan, 2011; Powell et al., 2003). In addition, several studies on refugees and their reaction to traumatic experiences indicate that refugees with more education (post-secondary) seem to

report low posttraumatic stress symptoms (Hussain & Bhushan, 2011; Powell et al., 2003).

Surprisingly, within adolescent refugee study samples, higher educational achievement was more likely to correlate highly with posttraumatic stress disorder (Slodnja, Kos, & Yule, 2002).

However, if adolescents' family were highly educated, parental educational achievement moderated the negative effects of the traumatic experiences (Fazel et al., 2012).

Refugee status is not the only condition that produces stress for people fleeing for their lives (Rosner & Powell, 2006). Resettlement, even in high-income environments, higher than refugees' home countries, do produce untold stressors, ranging from immigration issues, to socio-cultural adaptation (Fazel et al., 2012; Kroo & Nagy, 2011). There is however, the need to study both aspects of post-trauma – disorder and growth – to provide a fuller picture of the traumatized person's journey (Ai, Tice, Whitsett, Ishisaka, & Chim, 2007).

### Posttraumatic Growth in Refugee and War-Related Research

Posttraumatic growth in research has been observed in various trauma affected civilian populations including survivors of debilitating ailments (Leung et al., 2012; Ackroyd et al., 2011), abuse (Salo, Qouta, & Punamäki, 2005), loss (Davis et al., 2007), natural disasters (Jin, Xu, Liu, & Liu, 2014; Xu & Liao, 2011) and man-made disasters (Davis et al., 2007).

Posttraumatic growth has also been studied in non-civilian populations (Zerach, Solomon, Cohen, & Ein-Dor, 2013). In military-related samples, posttraumatic growth has been used as a predictor from combat exposure, unit cohesion and demographic characteristics ( $n = 1663$ ; Mitchell, Gallaway, Millikan, & Bell, 2013). The results of this military study indicated a high association between posttraumatic growth and combat exposure ( $\beta = 0.23, p < .001$ ) and stronger

unit cohesion ( $\beta = 0.11, p < .001$ ), confirming Tedeschi and Calhoun's (1996) assertion that trauma intensity and social cohesion correlate with posttraumatic growth.

Posttraumatic growth studies related to war have looked at adult and adolescent refugees (Kimhi, Eshel, Zysberg, & Hantman, 2010), former child soldiers (Betancourt et al., 2011; Betancourt, Borisovia, de la Soudière, & Williamson, 2011; Forstmeier, Kuwert, Spitzer, Freyberger, & Maercker, 2009), and former refugees and internally displaced persons (Jayasuriya, 2014; Powell et al., 2003). In a former refugee study population, Powell and colleagues (2003) investigated if posttraumatic growth could be found among former refugees ( $n = 75$ ) and former displaced persons ( $n = 75$ ) exposed to severe and prolonged trauma during the war in former Yugoslavia. Using the *Post Traumatic Growth Inventory* (PTGI, Tedeschi & Calhoun, 1996) as the main outcome instrument, the researchers translated the instrument for this Bosnian sample. Furthermore, other instruments used for this study were the *Posttraumatic Diagnositic Scale* (PDS; Foa, Cashman, Jaycox, & Perry, 1997), *Checklist for War Related Experiences* (CWE; Powell, Rosner, Kruessmann, & Butollo, 1998), and a measure of sociodemographic information. Because of postwar characteristics of this sample, the researchers used the CWE to replace the section on traumatic events in the original PDS scale.

Results of the study indicated that former refugees ( $n = 64, M = -1.24, SD = 5.33$ ) experienced significantly fewer traumatic events than displaced persons ( $n = 72, M = 1.55, SD = 6.65$ ), two-tailed t-test (unequal variances):  $t = -2.72, df = 132.64, p < .005$ . Contrarily, there were no significant differences in mean scores of PDS symptom scores between former refugees ( $n = 63, M = 9.11, SD = 8.84$ ) and former displaced persons ( $n = 72, M = 10.74, SD = 12.83$ ), for unequal variances,  $t = 0.87, n.s., df = 126.35$ .

For the Bosnian version of the PTGI, the researchers took out item one because they discovered that all other corrected item total correlations were above .51 except item one which had a correlation of .24. A factor analysis with the rest of the 20 items on the scale produced three factors, the combined effect explaining 57.93% of the total variance. Even though the number of participants was not large enough to provide significant interpretations, the current results added to the literature of posttraumatic growth beyond the borders of the United States.

The mean score on the Bosnian version of the PTGI was around 1.7 on a 5-point scale, which means that though participants did not outright reject the idea of posttraumatic growth, there was some indication of moderate growth. The overall corrected means were low in comparison to other studies on posttraumatic growth (Tedeschi & Calhoun, 1998). Interestingly, former refugees who spent a considerable amount of time abroad reported significantly more growth than former internally displaced persons, confirming the higher traumatic experiences scores for former displaced persons than former refugees. Furthermore, younger adults in this study obtained more growth than older adults, a possible explanation being that older adults have come to terms with their lot in life and may not make any adaptive changes (e.g. starting new family, etc.) after old ties are destroyed.

Jayasuriya's (2014) study, similar to Powell and colleagues, investigated posttraumatic growth in a post-conflict setting. However, whereas Powell and colleagues undertook a validation study on the Bosnian version of the posttraumatic growth inventory, Jayasuriya's aim was to investigate if positive psychological change due to traumatic experiences could have beneficial influence on mental health and well-being, especially in a post-conflict environment. Focusing on areas in Sri Lanka that experienced the fiercest fighting, Jayasuriya had 2,460



participants involved in this study. The researcher used the *Mental Health Inventory* (MHI-5; Veit & Ware, 1983) to assess psychological distress. Contrary to most studies that used the 21-item PTGI or its translated version (Howell et al., 2015; Jin, Xu, Liu, & Liu, 2014; Powell et al., 2003), Jayasuriya used the 10-item short version of the PTGI as a key independent variable.

Test-retests were undertaken 10 days after the first interview of participants. Kappa reliability coefficients were less than 0.8 across PTG, HMI-5, and measures of wellbeing. Similar to the Bosnian study (Powell et al., 2003), people who were housed on camps (e.g. refugee or internally displaced people's camps) had fewer traumatic experiences than those who did not. On the other hand, those who never stayed in camps had higher PTG scores than did those who stayed in camps. These findings could be attributed to the fact that those who stayed in camps were covered under the UN refugee law, and had donor agencies and volunteers visit regularly to provide basic supplies. On the other hand, those who were internally displaced but did not reside in camps had no protection either from the international community or from within their warring countries. The study confirmed that traumatic experiences could be both positively or negatively associated with posttraumatic growth. In addition, in post-conflict settings, different traumatic experiences may lead to either improved or harmful mental health and wellbeing.

In West Africa, Gregory and Prana (2013) undertook a study with Ivorian refugees in Liberia. The researchers wanted to determine if posttraumatic growth would increase measurably among Ivorian refugees if they learned the 10 modules taught in the Companion Recovery (CR) model. The CR model is accomplished through a collection of counseling theories including Gestalt, Cognitive Behavioral and Traumatic-Incident Reduction. They had earlier discovered

that this model was critical in an environment whose membership fluctuated, who had limited funding, and whose staff members were stretched beyond their abilities. According to them, the CR model was proven to reduce PTSD symptoms in a sample of child soldiers. For their study, fifty Ivorian refugees experiencing profound catastrophic trauma (the loss of the three fundamental levels at the base of Maslow's hierarchy of needs; Maslow, 1970) were given the CR training.

The Companion Recovery (CR) model comprises 10 modules placed in three sequential categories. The first is trauma impact reduction and education (overwhelming event, encapsulation, recognition). The second is resilience (release and resilience), and the third is posttraumatic growth (new self, rebuilding community, and commencement). The CR models include group training where participants learn to recognize the impact of trauma on the mind and body. Participants are then taught to select a companion who will maintain confidential and effective communication skills. Understanding and embracing of the concepts of the 10 modules help participants to become expert companions necessary for posttraumatic growth. Results from this intervention indicated that participants discovered a *new self* when they identified the power of surviving the profound catastrophic traumatic they had experienced due to the flight from conflict. Results further indicated participants' pride in rebuilding their social structure and it helped them reach out to help their communities in a positive and meaningful way; a connection to the *new possibilities* dimension of posttraumatic growth.

In another study in India, Hussain and Bhushan (2011) examined posttraumatic stress and posttraumatic growth among Tibetan refugees ( $n = 226$ ) across two generations. The writers investigated the mediating effect of cognitive-emotional regulation strategies among the

traumatic experiences the refugees had encountered, posttraumatic stress symptoms, and posttraumatic growth. The results showed a positive relationship between traumatic experiences and posttraumatic stress, and traumatic experiences and posttraumatic growth. The findings corroborate other studies on posttraumatic growth in traumatized populations (Hussain & Bhushan, 2013; Kroo & Nagy, 2011). Moreover, results of the Tibetan study indicated participants' ability to refocus on planning, accept what they could and could not control, and engage in positive refocusing mediated the relationship between traumatic experiences and posttraumatic growth. The study also confirmed the ability of refugees to thrive (Ai et al., 2007; Barrington & Shakespeare-Finch, 2013; Bonano, 2004). Due to this obvious ability to thrive, the writers suggested that therapy could be undertaken at the community level to promote mental health as well as social growth of the community, especially because of the collective nature of the traumatic experiences among refugees.

Again, Hussain and Bhushan (2013) analyzed the narratives of Tibetan refugees ( $n = 12$ ) residing in India, to discover the various dimensions of post traumatic growth that participants had experienced due to the adversities they had encountered. The participants were from diverse backgrounds, including students and ex-prisoners. Some of the participants had lost their support network and family members in the conflict. All the participants had experienced immense trauma and had survived extreme hardships in their flight.

Consistent with the findings of the proponents of the PTG construct (Tedeschi & Calhoun, 1998), Hussain and Bhushan's study provided major themes of positive changes in outlook toward the world and people, an appreciation of personal strengths, and an increase in meaningful intimate relationships. The two sub-themes within the "meaningful relationship"

major theme were family bonding and community bonding. These sub-themes confirm Tedeschi and Calhoun's "increased sense of one's own strength" and "change in relationship with others" factors within the posttraumatic growth construct.

The qualitative study of PTG, specifically the interpretative phenomenology, provided an understanding of how refugees made subjective meaning of their adversity; an understanding that is not easily discerned with quantitative studies. Moreover, in this qualitative study, the researchers did not have to grapple with the dilemma of culturally-sensitive instruments, as participants described the process they took in finding meaning out of their experiences. Some participants in this study preserved their cultural identity and artifacts, even while in exile. This preservation enhanced their strength-building capacities in the face of adversity, a phenomenon that would not have been identifiable had the researchers conducted a quantitative study. The preservation of cultural identity, norms, and artifacts could be added to the western-based instrument to make it applicable in more collectivist cultures.

Posttraumatic growth has also been assessed in service providers, especially those who work with trauma survivors. Just as vicarious trauma occurs in counselors whose clients are individuals suffering from various trauma-related symptoms, likewise vicarious traumatic growth can occur as counselors are exposed to clients in their growth from trauma – "vicarious trauma acts as a precursor to vicarious growth" (Barrington & Shakespeare-Finch, 2013, p. 94). In an Australian phenomenological study with 17 frontline clinical and managerial staff who worked with refugee torture survivors (Barrington & Shakespeare-Finch, 2013), the participants reported experiencing posttraumatic stress symptoms from hearing the stories shared by the trauma survivors.

Barrington and Shakespeare-Finch (2013) situated their study on the known phenomenon of vicarious traumatization (Moulden & Firestone, 2007) for service providers, in an attempt to discover if posttraumatic growth could also be experienced vicariously among service providers. Through semi-structured interviews, employing an interpretative phenomenological analytical lens, the results indicated that all participants reported symptoms of vicarious trauma as well as vicarious posttraumatic growth. The symptoms of the vicarious traumatization was expressed in *intrusive images* and the *destruction of existing beliefs*, similar to how traumatized people have their schemas changed (Calhoun et al., 2000; Kelly, 1963; Morina et al., 2014; Park, 2010). Within the vicarious posttraumatic growth, participants reported gaining a greater appreciation for life, forming new and meaningful relationship, as well as obtaining a deeper self-understanding. The increased spirituality factor within the main posttraumatic growth construct was also experienced in this group of therapists experiencing vicarious posttraumatic growth. A participant in this study, an atheist, admitted a sense of spirituality previously unknown. On the other hand, some realized they kept questioning their religious beliefs, which provided a different spiritual understanding, leading to their growth from the vicarious traumatization.

Like the Tibetan refugee study, the Australian study of service providers' experience with vicarious posttraumatic growth confirmed aspects of posttraumatic growth that had been previously studied. Both studies focused on the five dimensions within the posttraumatic growth construct and did not provide any in-depth explanation on how optimism and religiosity impinged on growth from trauma.

However, a sense of purpose received from the work they did with this Australian population, provided a different level of meaning making and gratitude for the opportunities they had. Participants in this study admitted a change in their values and philosophies, and a deeper appreciation for family and loved ones, confirming the factors within the posttraumatic growth construct (Tedeschi & Calhoun, 1996). Others however questioned their long-held religious beliefs, which made them abandon their faith, a confirmation of findings from other studies on posttraumatic growth (Powell et al., 2003). These findings are consistent with studies in Sweden (Kjellenberg, Nilsson, Daukantaitė, & Cardeña, 2014) and England (Splevins, Cohen, Joseph, Murray, & Bowley, 2010).

Results of the aforementioned studies demonstrate the growing interest in posttraumatic growth as it reinforces counselors' interest in the positive effects of trauma. Unfortunately, studies of posttraumatic growth in former refugees and/or former displaced persons are far and between (Powell et al., 2003; Hussain & Bhushan, 2011; Jayasuriya, 2014), and nothing yet on any former refugees from Africa. This study therefore comes at an opportune time to add to the discourse on growth beyond trauma in a population generally associated with various symptoms of posttraumatic stress disorder (Shawyer et al., 2014; Betancourt, McBain, Newnham, & Brennan, 2014). Furthermore, a re-focus on strengths within traumatized populations helps provide a more complete picture of the traumatized individual (Ai et al., 2007). The shift of focus away from illness and disability following trauma, concentrates on the strengths and growth of refugees despite endured traumatic experiences (Powell et al., 2003; Tedeschi & Calhoun, 1996). In addition, this view aligns with the values of counseling (ACA, 2014; Barden, Conley & Young, 2015), hence a study on the growth and psychological well-being of former

refugees will inform counselors on strengths they can address in therapy with current refugees or even resettled former refugees.

### Religiousness

Religiousness, or religiosity, or religious commitment as a construct is often confused with spirituality (Brownell, 2014; Pargament & Mahoney, 2012; Pargament & Maton, 2000). Therefore, in the subsequent subtopics, the construct will be defined and its similarity to, and difference from spirituality, explained. Later, literature is reviewed on how the construct mediates the negative effect of trauma.

In many of the world's major religions (Buddhism, Christianity, Hinduism, Islam, Judaism), suffering or adversity is seen as a necessary role in personal growth, as well as the development of wisdom (Tedeschi & Calhoun, 2004). Thus, it may be reasonable for people who see themselves as religious to experience growth from the adverse experiences they encounter. Religion is broadly defined as an individual or institutional field that deals with both secular and sacred purposes (Pargament & Mahoney, 2012). Religion can also be expressed as human practices and behaviors concerned with a search for the sacred; a search founded on dogma, traditional practices, and institutional regulations (McIntosh, Poulin, Silver, & Homan, 2011; Pargament & Maton, 2000). In a study identifying religiosity's protective effect on war-related distress, Ringdal and Ringdal (2010) included religious activity. In this case, religious activity was equated with interpersonal religious commitment (Worthington et al., 2003). Likewise, dedication and belief in people's definition of religiosity was equated with intrapersonal religious commitment (Worthington et al., 2003). Thus, religion or religiosity spans the whole gamut of

individual or institutional practices that focus on a search for the sacred through regulations, dedication, practices and beliefs.

Spirituality, on the other hand is a quest; a continuous search for the sacred (Batson, Schoenrade, & Ventis, 1993). Spirituality, unlike religion, is an individual experience and does not necessarily work in any institutional setup. Previous research did not distinguish between religiosity and spirituality (Pargament & Mahoney, 2012); however, recent researchers are consistently contrasting the two, with some asserting that religion is dogmatic, restrictive and institutional, whereas spirituality is subjective, personal, and life-enhancing (Brownell, 2014; King & Crowther, 2004; Pargament & Mahoney, 2012; Prati & Pietrantonio, 2009). In many studies, participants often identify themselves as both religious and spiritual, which is not surprising since both religiosity and spirituality can be expressed individually as well as socially, and both can either hinder or foster well-being (Pargament & Mahoney, 2012).

Religion and spirituality span the spectrum of New Age mysticism to traditionally religious approaches applied to everyday life (King & Crowther, 2004). In religion, people engage in group activities that consist of specific behavior situated within a particular doctrine; they are also known to exhibit some denominational characteristics (King & Crowther, 2004; Brownell, 2015). The social support aspect of religiosity and religious commitment, more than spirituality, was the underlying reason for the choice of religiosity as a construct for this study. People who regularly take part in their religious activities and traditions have a larger social network, a support system that can mitigate the negative effect of war experiences on war-related distress (Ringdal & Ringdal, 2010).



In a study on older adults in Ethiopia (East Africa), Hamren, Chungkham, and Hyde (2014) investigated the influence of religiosity, spirituality and social support on quality of life ( $n = 214$ ). The researchers employed the *Brief Multidimensional Measure of Religiousness/Spirituality* (BMMRS; Fetzer Institute & National Institute on Aging, 1999) and the *Multidimensional Scale of Perceived Social Support* (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1998) as instruments measuring the variables under consideration. Various bivariate analyses were conducted to examine differences in quality of life based on mean CASP-11 scores. Males ( $M = 35.94$ ,  $SD = 6.91$ ) had significantly higher mean CASP score than women ( $M = 33.15$ ,  $SD = 7.19$ ). Additionally, married participants had highest mean scores ( $M = 36.56$ ,  $SD = 5.85$ ) with those who were never married obtaining the lowest scores ( $M = 29.36$ ,  $SD = 4.95$ ).

In the correlational analyses of the East African study, despite the non-probability sampling method used in obtaining participants, results indicated that both religiousness and/or spirituality ( $r = .42$ ) and social support ( $r = .44$ ) were positively and moderately correlated with quality of life. Spirituality and/or religiousness and social support were themselves positively correlated ( $r = .24$ ), albeit a weak correlation.

### The Place of Religiousness or Religious Commitment in Trauma

The religiousness or religious commitment or religiosity construct is constantly undergoing changes. In the discourse of posttraumatic growth, religious coping is identified as a strong predictor to growth, and partially shares the same descriptions as spirituality (Prati & Pietrantonio, 2009; McIntosh, 2011). Joseph (2011) however cautions against the assumption that higher posttraumatic growth indicates higher religiosity. He suggests that researchers, in using the total PTGI scores, can either remove the spiritual items from the scale, use the subscales

instead of the total, or use alternative measures that do not contain spiritual/religious-related items to assess growth from adversity. Joseph's restraint allows researchers to avoid the confusion over change that survivors themselves see as *growthful*, and those that the scientific community proves indicative of positive functioning. Finally, Joseph points that whereas an increase in religiosity could mean "growth" for one person, a decrease in religiosity will be the growth for another.

Thus, to investigate the effect of religiosity on trauma, a sample of 54 students who had experienced major traumatic events took part in a study that examined the association between event-related rumination, pursuit of religion-and religious involvement, and posttraumatic growth (Calhoun, Cann, Tedeschi, & McMillan, 2000). Despite the study's inability to determine longitudinal direction of effect, results indicated that specific dimensions on the instrument used (*The Quest Scale*; Batson, Schoenrade, & Ventis 1993) like "openness to religious change", independently predicted the amount of reported growth ( $\beta = 0.29$ ) in the participants.

Concerning religiosity's shared characteristics with spirituality, McIntosh, Poulin, Silver and Holman (2011) undertook a national survey of Americans after the 9/11 attack. The researchers wanted to assess the role of spirituality and religiosity on the physical and mental health of the population after a collective trauma. Thus, in a national longitudinal study ( $N = 890$ ), mean levels of religiosity and spirituality, which the researchers assessed on a 1-5 scale (5 representing highest levels) were 2.85 for religiosity and 3.30 for spirituality. Religiosity and spirituality were found to be highly correlated ( $r = .60$ ). Religiosity ( $\beta = 0.12, p < .05$ ), like spirituality ( $\beta = 0.09, p < .01$ ), in 9/11 study, predicted higher levels of positive affect. Interestingly, religiosity, but not spirituality, predicted lower incidence of mental ailments

(Incident Rate Ratios [IRR] = .88,  $p < .05$ ). Overall, religiosity was associated, physical health-wise, with decreased incidence of musculoskeletal ailments three years after the 9/11 attacks. Psychologically, religiosity was connected with lower incidence of mental ailments, more positive affect, and fewer cognitive intrusions three years after the 9/11 attacks.

In other studies on growth after trauma, religious coping was found to be more beneficial for older people and women than other sub-groups (Chaaya et al., 2007). In the sample of older adults from Lebanon's underprivileged refugee and non-refugee communities, results of the study reflected older people who attended to their religious activity regularly reported less depression than those who did not. Similarly, within a convenience sample of 679 college students, Krägeloh, Chai, Shepherd, and Billington (2010) conducted a study to identify how participants' level of spirituality and religiosity enhanced the use of religious coping, relative to other coping methods. The two instruments used in this study, apart from the demographic questionnaire, were the *Brief COPE* (Carver, 1997), and the 32-item WHOQOL-SRPB (WHOQOL-SRPB Group, 2005).

Results of the Krägeloh, et al., (2010) study indicated that though the mean total WHOQOL-SRPB score was higher for females ( $M = 106.07$ ) than for males ( $M = 105.65$ ), the results were not statistically significant [ $t(603) = -0.18, p > .05$ ]. Additionally, participants' scores on the sub-scale "turning to religion" from the *Brief COPE* instrument were correlated with their scores on "secular coping strategy". Furthermore, turning to religion was significantly related to "emotional support" and "instrumental support," and most of the maladaptive coping strategies. For participants with higher levels of spirituality, religious coping was most related to active coping strategies and least related to maladaptive ones. Despite the large sample size, as

well as the complex statistical analysis, a convenience sampling method made generalizability invalid because not every member of the population had an equal chance of having their voice heard (Frankel & Wallen, 2003; Gall, Gall, & Borg, 2007).

In Hussain and Bhushan's (2013) study with Tibetan refugees discussed earlier, though the researchers did not ask questions that would elicit answers to provide insight into how participants used religiosity to gain strength, the researchers discovered that participants' Buddhist teaching mediated the negative effects of trauma. Refugees' religious assimilation in no way made them helpless; they obtained strength through their connection with each other and their religion, as well as their ability to accept the situations they could not change. Through this acceptance, participants were able to fit within their cognitive schema, an existential plan, leading to their positive outlook on life – optimism. In this particular study, optimism was identified as contributing to the “changes in outlook” major theme. What the researchers did not provide is whether the participants' outlook change helped them have the hope that good will happen to them in the future (Carver & Scheier, 2002; Rand & Cheavens, 2012), or their focus ended in their gratitude to be alive.

Another phenomenon often identified within war surviving populations is unforgiveness and the desire for revenge (Betancourt et al., 2014). Within the domain of religiosity, forgiveness and posttraumatic growth seem to thrive (Schultz, Tallman, & Altmaier, 2010). In positive psychology's growth-promoting responses to negative life experiences, 146 adults who participated in a study undertook an initial transgression narrative. The participants wrote descriptive narratives of interpersonal transgression before completing study measures. Analysis of results from the study indicated that unforgiveness significantly correlated ( $r = .22, p < .01$ )

with the “appreciation of life” domain in the posttraumatic growth inventory. In this study, importance of religion and spirituality did not mediate the relationship between unforgiveness and growth. However, benevolence positively correlated with the “relating to others” domain on the posttraumatic growth inventory ( $r = .28; p < .01$ ). Importance of religion and spirituality also predicted growth and accounted for a significant increase in variance. All the above point to the influence of religiosity on posttraumatic growth in traumatized populations. A caveat to the study of religiosity in diverse trauma-related populations is provided by Pargament and his colleagues, who advise that for effective differentiation, religiosity instruments that specify how individuals make use of religion to understand and deal with stressors should be used in research (Pargament et al., 2000).

If religiosity, rather than spirituality is more social than personal, then to identify how Liberian former refugees and displaced persons have used this particular construct as a uniquely shared phenomenon to grow from the traumatic experiences of the war is particularly appealing to this study. If the population under study (this dissertation) uses religiosity, it will be interesting to know the extent to which religiosity has fostered well-being, and how the social connection within this construct has encouraged optimism and hope for good outcomes in the future.

### Optimism Within Traumatized Populations

The next couple of sections address optimism, another construct within positive psychology. The construct will be explained in its applicability to traumatized populations. The

subtopics will provide an argument for the need for optimism within Liberian former refugees and displaced persons.

### Definition of Optimism

Optimism is the belief, hope, and confidence that good things will happen in a person's life instead of bad things (Carver & Scheier, 2002; Rand & Cheavens, 2012). Optimists are not disillusioned; they acknowledge the existence and importance of adversity. They however choose to find a ray of light in the midst of the dark, while they find solutions to address their problems (Carver, Scheier, Miller, & Fulford, 2009). Optimism is known to have emanated from folk wisdom; it is also grounded on theory and research into what motivates human beings and how this motivation in turn is expressed behaviorally. Optimism specifically connects with Fredrickson's broaden and build theory of positive emotions.

Optimism is similar to hope and the two constructs have been used interchangeably in research as well as in expression (Rand & Cheavens, 2012). Hope is exhibited when people perceive they have the ability to produce the routes that lead to the achievements of desired goals, and are motivated to use those routes (Rand & Cheavens, 2012). Hope, like optimism, involves the perception that one's goals can be achieved.

Optimism is seen as the opposite of pessimism; and these two phenomena have been put on extreme ends of a continuum. Researchers have focused on people's expectations of the future to define optimism and pessimism. Like Kelly (1963) and Berne (1963), optimism experts believe that people fit their behavior to what they see as desirable. These definitions are based on the expectancy-value models of motivation where people behave according to their expectation of rewards (Wigfield & Eccles, 2000).

Optimism and pessimism are general versions of confidence and doubt (Carver, Scheier, & Segerstrom, 2010). This implies that people are neither all optimistic nor all pessimistic; these emotions range along a continuum and may fluctuate depending on the situation. However, some exhibit more of one than the other. Accordingly, a person's expectation of the future is dependent on past experiences (Fredrickson, 1998; Kelly, 1977). When a person expects good outcomes, she or he is more amenable to a plethora of options, which come in good use in the face of adversity (Fredrickson, 2001). Optimists make a conscious effort to seek knowledge about their current situations to help them make informed decisions about their future. Pessimism on the other hand leads people to self-defeating patterns (e.g. alcohol abuse, substance abuse, unhealthy sexual behaviors); thus, optimism predicts longer life (Carver et al., 2010).

#### How Traumatized People Use Optimism to Heal

Relationships between optimism and trauma have been examined in diverse groups of individuals who have encountered adversity. People's perception of their ability to cope enables them have a positive outlook on life and expect good things to happen because they can control their environments (Benight & Bandura, 2004; Kelly, 1963). There is also evidence that a person's disposition to optimism may be attributable to certain environmental factors (Broekhof et al., 2015). In the Broekhof study, even though optimism was inversely related with all subtypes of childhood trauma, important sociodemographic, clinical and lifestyle characteristics moderated this inverse relation.

Optimists and pessimists are different; these differences have an indelible influence on their outlook of life. The difference in how they approach problems in life, and the manner and

success with which they cope with adversity also affects how they navigate future traumatic events (Carver & Scheier, 2002; Fredrickson, 1998; Kelly, 1977). A person's expectation of the future determines whether he or she is an optimist or pessimist. Just as there is a dose-response relationship between trauma impact and posttraumatic growth (Powell et al., 2003), there is also evidence to indicate a dose-response relationship between severity of depressive symptoms, time since last episode, and levels of optimism. Thus, the more severe or recent a person's depressive episode, the lower the levels of optimism (Broekhof et al., 2015).

In the optimism literature, researchers talk about dispositional optimism as a personality trait that enables people to hold positive expectations for their future (Broekhof et al., 2015). In a study examining the association between affective disorders and childhood trauma with dispositional optimism, Broekhof and colleagues conducted a study with 2104 subjects (age range 18-65). Multivariate analyses of results indicated that dispositional optimism was inversely related with current affective disorders (depression:  $\beta = -1.089$ ; anxiety:  $\beta = -1.066$ ,  $p < .001$ ). Participants who indicated they had endured childhood emotional maltreatment scored lower on the optimism scale - the *Life Orientation Test, Revised* (LOT-R;  $\beta = -0.905$ ,  $p < .001$ ). However, those with positive life events had scores associated with higher levels of optimism ( $\beta = 0.235$ ,  $p > .001$ ).

In a convenience sample of 216 children ( $n_{\text{girls}} = 97$ ,  $n_{\text{boys}} = 119$ ), Veronese and colleagues (2011) conducted a correlational study to explore the relationship between optimism, perceived happiness and life satisfaction in a group of Palestinian children. Even though all four subgroups displayed a generally optimistic life orientation, the rural and refugee camp children reported a more positive and optimistic life orientation. There were no significant differences in



both optimism and pessimism scales for gender. The researchers concluded that despite the daily extreme violence that these children were exposed to, they displayed positive adjustment to traumatic events. It could also be that they are so used to the violence that it no longer disturbed them like non-traumatized people experience. Situated within social context, optimism seems to help refugees and traumatized youth to cope with violent exposures.

Moreover, there is research connecting optimism to positive mood and good morale (Peterson & Steen, 2012). Positive mood and good morale lead to perseverance and affective problem solving (Fredrickson, 2001), which in turn lead to overcoming of negative traumatic symptoms. People who are generally optimistic often explain causes of events that happen to them, and use these explanations as a stepping-stone towards growth from adversity (Peterson & Steen, 2012). Contrarily, Peterson and Steen explain that other people become passive because of the belief that no matter the effort exerted to produce something, they will obtain negative results. The writers refer to such people as having the “learned helplessness phenomenon”. Peterson and Steen concluded that uncontrollable bad events, more than good events are likely to produce helplessness among people. Thus, people who have the learned helplessness phenomenon are more likely to exhibit negative mood and bad morale. Generally, individuals who have experienced intense childhood trauma, where they felt helpless, often go into the mode of learned helplessness because they have situated the past experiences within their current schema.

The similarity between optimism and hope have led researchers to conduct several studies in populations dealing with chronic illness and those dealing with everyday stresses (e.g. achievement in school; Rand & Cheavens, 2012). Being hopeful can positively affect a person’s

health. Research indicates high levels of hope correspond with better ability to use information about physical ailments to help prevention efforts (Kapp, Rand, & Damman, 2015; Legg et al., 2014). In addition, hopeful people, like optimistic people, are able to make informed decisions on their health based on information provided (Rand & Cheavens, 2012). In a similar study on health and hope, high-hope women more than their low-hope counterparts were able to perform better on a cancer facts test, even when controlling for previous academic performance. Not surprisingly, hope was inversely related to intentional attempts at self-harm (e.g. violence towards self and others, suicide) because these self-harm efforts are incompatible with physical health, goals that hopeful and optimistic people strive to achieve.

In sum, apart from a few scattered studies on Asian populations, there are limited studies within non-western populations, especially on how optimism and pessimism relate to quality of life (Chang, Sanna, & Yang, 2003). Testing a construct like optimism across cultures will enhance the literature a great deal.

### PTG, Religiousness, and Optimism in Traumatized Populations

In a follow up study to build up on an earlier study on war related trauma and its association with PTSD symptoms of Kosovo war refugees ( $n = 75$ ; Ai, Peterson, & Huang, 2003), Ai and colleagues' (2007) investigated 51 participants. In contrast with many studies that used the PTGI to assess post-trauma growth, Ai and colleagues used the 50-item *Stress Related Growth Scale* (SRGS; Park, Cohen, & Murch, 1996). They also used the 17-item PTSD symptom scale (PDS; Foa, Riggs, Dancu, & Rothbaum, 1993), the 27-item *Multidimensional Coping Scale* (Wills, 1996), the 12-item *Hope Scale* (Snyder et al., 1991), and the short version

of the *Communal Traumatic Events Inventory* (Weine et al., 1995). By follow up, the PTSD symptom severity had reduced from 23.45 ( $SD = 10.68$ ) in the first study to 22.54 ( $SD = 12.77$ ) in the current study ( $t = 0.55$ ,  $p = .58$ ) showing no significant reduction over the 10-month period. An explanation for this stable PTSD symptomatology, according to the researchers, was due to the traumatic experience of ethnic cleansing participants endured. The effect of ethnic cleansing could be equated to any individual experiencing repeated multiple traumas, and therefore the 10-month follow up study was not enough time to have provided a reduction in PTSD symptoms.

Results of the study indicated that neither PTSD symptoms nor PTG symptoms correlated with any of the demographic variables. In this study, unlike the Bosnian study (Powell et al., 2003), PTSD was not related to PTG. Impact of war-related trauma notwithstanding, participants who were more hopeful and pursued cognitive coping tended to report growth at the follow up study. Moreover, hope served as a mediating variable on the negative effect of war-related trauma on current functioning.

Similar to other studies that found education correlating with high PTG scores, the Ai et al., (2003) study results indicated education's connection with greater hope. There was however no effect of the role of optimism and perceived social support on PTG and PTSD symptoms, contrasting other studies that found optimism and perceived social support mediating the effect of traumatic experiences on PTG (Kapp, Rand, & Damman, 2015; Legg et al., 2014). Likewise, coping had no direct effect on participants' growth even though it correlated with cognitive coping. An explanation for this non-effect of coping on growth could be because participants had been settled in a new environment, culturally and socially different from what was familiar to

them. Moreover, it is possible that had the researches used the PTGI, correlations between constructs may have been different from what was found in the current study.

In another study working with posttraumatic growth, religiosity, and optimism, Kroo and Nagy (2011) identified posttraumatic growth among traumatized Somali refugees living in Hungary. The study focused on transformative adjustment of Muslim East African war refugees from Somalia ( $n = 53$ ) who had resettled in Hungary. For this study, instruments used included the *Post-Traumatic Growth Inventory* (Tedeschi & Calhoun, 1996), with an open-ended item that allowed participants to share any significant changes experienced due to the trauma. The researchers explained that they added the extra item to identify schemas within participants' own narrative (consistent with the cognitive behavioral theory of trauma), as well as any culturally relevant phenomena of growth within Somali refugees.

The demographic questionnaire for this sample included items that provided answers for family variables, trauma severity, and environmental factors (e.g. satisfaction with living conditions). Other instruments were the *Life Orientation Test, Revised* (LOT-R, Scheier, Carver, & Bridges, 1994) to measure optimism, and the *Adult Trait Hope Scale* (Snyder et al., 1991) to assess hope. Finally, the researchers provided a five-item scale to measure religiosity and religious change. However, a single-item to measure the presence of religious change in this study may be as invalid as other single-item measures to understand participants' religious change, religiosity, or spirituality (King & Crowther, 2004).

To assess religious coping in this study sample, Kroo and Nagy used the *Brief Religious Coping Scale* (Pargament, Smith, Koenigh, & Perez, 1998) as their instrument of choice. Though the participants in this study recognized the opportunities they had in a western country, many

admitted they had unresolved issues pertaining to separation from family. Hope was significantly related to PTGI total score ( $r = .483, p < .001$ ) as well as all PTGI sub-scores. However, the LOT-R total score was not related to the PTGI or any of its subscales.

The majority of this study's sample (73.6%) indicated they were very religious. Results from measuring negative religious coping indicated a moderate positive correlation with total PTGI ( $r = .434, p < .001$ ). Positive religious coping was significantly positively related to PTGI subscale of "Relating to others" (Spearman  $\delta = .298, p < .05$ ). Positive religious coping was also significantly positively related to the spiritual change subscale (Spearman  $\delta = .436, p < .001$ ). Some factors positively associated with personal growth were hope, negative religious coping, perceived social support, and religiosity. For this particular sample, perceived social support was very important in interpersonal relationships due to separation from loved ones. Participants further used religious coping to explain the atrocities they endured. There was no significant relationship between optimism and PTG. The results of this study add to the literature of thriving following traumatic events as a global phenomenon transcending western borders. Despite the rigor of this study and the addition to the coexistence of PTG and PTSD in the trauma literature, the convenience sampling method used could make generalizability to similar samples invalid. As with many other studies on refugee trauma and posttraumatic growth (Jayasuriya, 2014; Powell et al., 2003), it was difficult for the investigators to undertake any pre-trauma comparison to help track the rate of posttraumatic growth in a traumatized sample. The similarity of this East African population to the present dissertation under study notwithstanding, the participants in the Hungarian study are East Africans resettled in a western country, as

opposed to the study participants who have repatriated either voluntarily or involuntarily into their country of origin, a developing country with a struggling economy.

Taku and Cann (2014) conducted a study across continents – US and Japan – to assess college students’ positive changes resulting from psychological struggle with challenging life situations. The study examined the relationship of national background and religion with posttraumatic growth, in addition to variables like optimism, pessimism, and gender. The researchers worked with three hypotheses. The first was that nation and religion would be related to overall PTG, predicting that Americans would report higher levels of overall growth than Japanese. Secondly, nation and strength of religious beliefs were predicted to contribute to overall PTG, even when controlling for individual variables. Finally, individual difference variables and individuals’ perception of triggering events in PTG would vary across the PTG domains in both the American and Japanese samples. Within this third hypothesis were predictions of higher optimism and perception about triggering event correlating, as well as gender differences in the American but not Japanese samples, and finally, stronger religious beliefs predicting growth in “spiritual change” domain of PTGI only in the American sample.

Results of the study indicated that the first hypothesis was supported. American participants reported higher PTGI total scores ( $M = 53.98$ ,  $SD = 21.61$ ) than the Japanese participants ( $M = 44.74$ ,  $SD = 20.25$ ). However, the main effect of religious affiliation was not significant. Moreover, nation ( $\beta = -0.17$ ,  $p < .05$ ) and religious strength ( $\beta = -0.11$ ,  $p < .05$ ) predicted PTGI total scores, explaining 5.0% of the variances ( $R^2 = .04$ ,  $F(4, 603) = 7.95$ ,  $p < .001$ ). In the second hypothesis, gender ( $\beta = 0.19$ ,  $p < .001$ ), then optimism ( $\beta = 0.18$ ,  $p < .001$ ) before religious strength ( $\beta = -0.10$ ,  $p < .05$ ) were associated with higher levels of PTG,

supporting the second hypothesis; nation and religious strength improved the regression model [ $F(5, 560) = 12.17, p < .001, R^2 = .10$ ).

In the third hypothesis, a cross-national difference in optimism and pessimism level indicated American participants were more optimistic and less pessimistic than the Japanese participants. The researchers admitted that despite the cultural differences between the two groups, including the use of a western-based instrument, the study adds to the literature of posttraumatic growth in explaining how subjective experiences people go through can contribute to the level of growth after trauma. They finally suggested a more comprehensive instrument that taps into perception of cultural growth post-trauma to measure growth after adversity.

### Summary

The studies reviewed above speak to the importance of identifying growth from trauma in refugees and displaced persons. Even though majority of wars and refugee situations occur in the Mediterranean and African continent, the majority of these studies reviewed concern refugees either resettled in Western countries or those within Europe and a few in Asian countries. It is reasonable to study growth within a people who left to save their lives, but are back to rebuild their country. Finally, because the United Nations' focus is on repatriation, identifying what makes repatriated former refugees and displaced persons thrive will inform researchers and counselors on the kind of help to provide current refugees and displaced persons as they prepare for repatriation.

## CHAPTER THREE

Like a road map, the methodology section addresses the processes undertaken for this study (Fawcett & Garity, 2009). Topics to be addressed will include research question and hypotheses, research design, institutional review, inclusion and exclusion criteria for sampling, sampling methods and techniques, instrumentation, data collection, ethical considerations and limitations to the study, associated with the kind of research design used for this study.

### Research Question

The study investigated the directional hypothesis of the relationship among war-related trauma, religious commitment, and optimism on posttraumatic growth in adult Liberian former refugees and internally displaced persons (IDPs). Several hypotheses drawn from the theoretical framework, helped answer the question under investigation.

### Hypotheses

The investigation tested the specific directional hypothesis that adult Liberians' high trauma experience with high religious commitment and optimism would relate strongly with posttraumatic growth. Moreover, the study examined the relationship that existed among trauma, religious commitment, optimism and posttraumatic growth with reported demographic information of adult Liberian former refugees and internally displaced persons (e.g. displacement status, gender, age, educational qualification, and employment status).

**H<sub>01</sub>:** There will be a relationship between impact of event (as measured by the *War Trauma*



*Screening Index* (WTSI); Layne, Stuvland, Satzman, Djapo, & Pynoose, 1999) scores and posttraumatic stress disorder scores (as measured by PCL-5; Weathers, Litz, Keane, Palmieri, Marx, & Shnurr, 2013).

- H<sub>0</sub>2:** Adult Liberian former refugees and IDPs who use positive emotions in processing their war-related experiences will have high posttraumatic growth scores (as measured by the PTGI, Tedeschi & Calhoun, 1996) and low posttraumatic stress disorder scores (as measured by the PCL-5, Weathers et al., 2013).
- H<sub>0</sub>3:** Adult Liberian former refugees and IDPs who use positive emotions in processing their war-related experiences will have high religious commitment scores (as measured by the Religious Commitment Inventory [RCI-10, Worthington et al., 2003]) and low posttraumatic stress scores (as measured by PCL-5, Weathers et al., 2013).
- H<sub>0</sub>4:** Adult Liberian former refugees and IDPs who use positive emotions in processing their war-related experiences will have high optimism scores (as measured by the Revised Life Orientation Test [LOT-R, Scheier, Carver, & Bridges, 1994]) and low posttraumatic stress scores (as measured by PCL-5, Weathers et al., 2013).

### Exploratory Research Questions

In addition to the hypotheses, several exploratory research questions were posed to situate the study within similar studies (Das, Dubus, & Silka, 2013; Powell et al., 2003; Shawyer et al., 2014), as well as add to the literature on trauma and posttraumatic growth with emphasis on repatriated former refugees and IDPs in West Africa.

1. Do adult Liberian former refugees or IDPs' traumatic experiences (as measured by the subscales of the PCL-5, Weathers et al., 2013), optimism (as measured by the total scores

of LOT-R, Scheier et al., 1994), and religious commitment (as measured by the subscales of RCI-10, Worthington et al., 2003) predict their level of posttraumatic growth (as measured by the total scores of PTGI, Tedeschi & Calhoun, 1996)?

2. Is there a statistically significant difference in posttraumatic growth scores (as measured by PTGI, Tedeschi & Calhoun, 1996) between those who repatriated over 10 years ago and those who repatriated less than 5 years ago, and between those who became refugees and those who were internally displaced?
3. Is there a mean difference in adult Liberian former refugees and IDPs' posttraumatic growth scores based on academic qualification, age, and gender?
4. Is there a mean difference in adult Liberian former refugees and IDPs' optimism scores based on gender, and academic qualification?
5. Is there a mean difference in adult Liberian former refugees and IDPs' religious commitment scores based on gender and academic qualification?
6. Is there a mean difference in adult Liberian former refugees and IDPs' level of optimism based on employment and income?
7. Is there a mean difference in adult Liberian former refugees and IDPs' level of religious commitment based on perception of religiousness, religious affiliation, and religious involvement?

### Research Design

The design for this study was quantitative, specifically a descriptive correlational research design (Fawcett & Garity, 2009; Gall et al., 2008). Fawcett and Garity (2009),

cautioned researchers not to minimize the importance of descriptive research as they become a prerequisite for correlational and experimental design; hence the use of descriptive design to describe the phenomenon under study before predicting and/or identifying any inherent manifest and/or latent relationships. The descriptive correlational research design was judged appropriate because the purpose of the study was to identify the directional relationship among adult Liberian former refugees and IDPs' war-related traumatic experiences, religious commitment, optimism, and posttraumatic growth in the natural setting without manipulation (Fraenkel & Wallen, 2003).

### Population and Sampling

The target population for the study consisted of adult Liberian former refugees and internally displaced persons. Presently, there are a little over four million people in Liberia, with 43.5% below the age of 15 (United Nations, 2016; the World Bank, 2016). The accessible population, however, were adult Liberians who had once been refugees or internally displaced or both, during the Liberian civil war. The accessible population must be resident and/or be present in Monrovia at the time of the data collection. Five hundred participants took the study package and 444 returned the completed package (Sivo, Saunders, Chang, & Jiang, 2006). Had the sampling method been a probability type, we would have asserted that there was an 88.8% response rate, consistent with the type of face-to-face data collection of this study and other studies of this ilk (Bowling, 2005).

Two non-probability sampling methods were used – purposeful and snowballing (Gall et al., 2007; Ludbrook & Dudley, 1998). The first and main method was purposeful sampling.

Specifically, because the participants were likely to be “information-rich” concerning the topic under investigation (posttraumatic growth after war-related trauma; Gall et al., p. 178), the purposeful sampling method was selected. Moreover, because of the religious commitment construct in the study, purposeful sampling occurred with the intentional sampling of both Christian and Islamic participants because these were the two main religious groups with which Liberians identify (Phillips, 2015). The second sampling method was snowball. The snowball sampling method was achieved through recommendations from participants obtained from the purposeful sampling method. These participants recommended others in the community or social organizations or in their schools, who fled with them in the heat of the war, and who were considered to have similar and different experiences necessary to contribute to the study.

#### Inclusion Criteria

To be included as part of the sample, participants must have been resident in Liberia during the civil war between 1997 and 2003 (Gerdes, 2013; Omata, 2013). Furthermore, participants must have been old enough (at least six or seven years old) during the war, and/or should have remembered the flight from the attack from either side of the warring factions. In addition, participants must self-report to have at least an eighth grade English reading and comprehension to be given the package. Finally, participants must have, on their own volition, decided to contribute to the study under investigation.

### Incentive

Two types of incentives were given to participants – one monetary and one non-monetary. Each participant received US\$5 (LaRose & Tsai, 2014; Mercer, Caporaso, Cantor & Townsend, 2015; Warriner, Goyder, Gjertsen, Hohner, & McSpurren, 1996) placed in a white envelope. The monetary incentive was made possible through grants from the Association for Counselor Education and Supervision (ACES, Philadelphia, 2015), and the American Mental Health Counselors' Association (AMHCA, Louisiana, 2016). Each participant also received an H2 pencil.

The subsequent section provides information about each of the data collection instruments, including their psychometric properties and their appropriateness for the study under investigation.

### Instrumentation

The constructs under investigation were war-related traumatic experiences, religious commitment, optimism, and posttraumatic growth. There are concerns about culturally sensitive assessment tools for research, therefore, identifying if western-based assessments will be applicable in non-western populations to measure the same phenomena would add to the literature on trauma (Cogle, Kilpatrick, & Resnick, 2012). Thus, the data collection instruments used in the study to elicit information to address the constructs were:

- (a) War Trauma Screening Inventory (WTSI; Layne, Stuvland, Saltzman, Djapo, & Pynoos, 1999) to assess the visual war experiences;

- (b) Post-Traumatic Stress Disorder Checklist consistent with the fifth edition of the Diagnostic and Statistical Manual (PCL-5, Weathers, Litz, Keane, Palmieri, Marx, & Shnurr, 2013) to assess the psychological effect of the post-war experiences;
- (c) Religious Commitment Inventory (RCI-10, Worthington et al., 2003) to assess the level of religious commitment or religiousness or religiosity of participants;
- (d) Revised Life Orientation Test (LOT-R, Scheier, Carver, & Bridges, 1994) to assess participants' level of optimism;
- (e) Post Traumatic Growth Inventory (PTGI, Tedeschi & Calhoun, 1996) to assess participants' psychological growth after the war-related traumatic experiences.

*A General Demographic Questionnaire* (which included questions investigating participants' self-reported age, gender, educational qualification, family status, status of displacement during the war, and reaction to the recent Ebola epidemic) was also used to obtain demographic information of participants.

Aware of the challenges associated with conducting research in developing countries (Malhotra, Agarwal, & Peterson, 1996), the researcher printed all questions and provided pencils for each of the participants, to ensure the paper-and-pencil test was well organized with as few demands to participants as possible. Finally, the informed consent process was done in a culturally sensitive manner, after consulting with local contacts.

#### General Demographic Questionnaire

The researcher created the *General Demographic Questionnaire* under the guidance and approval of her committee members. Questions elicited participants' self-report on their demographic information (e.g. age, gender, level of education, employment status, monthly

income, family status, status of displacement, country of refuge, perception about their level of religiousness, religious affiliation, and reaction to the Ebola epidemic).

The demographics, though consistent with research in similar areas, also sought information about participants' reaction to the Ebola epidemic (at the time of data collection, the country was experiencing a second bout of the Ebola virus, though with less reported death cases than reported in the first bout). This particular question was asked to understand if experiencing such a nation-wide epidemic was likely to compound any hidden post-traumatic stress disorder symptoms accrued from the war-related traumatic experiences. An adult Liberian who was both a former displaced person and a refugee, and who currently resides in Monrovia, the site of the research study, reviewed the General Demographic Questionnaire to ensure its appropriateness.

#### War Trauma Screening Index

Of the many instruments used in post-traumatic stress studies in war populations (e.g. *Combat Exposure Scale*, Keane & Caldwell, 1989; *Crisis Structure Interview*, Llabre & Hadi, 1994), the *War Trauma Screening Index* (WTSI; Layne et al., 1999) was chosen because of its simplicity as well as its ability to assess what participants experienced and saw in the war, either as it pertained to them or their loved ones.

The WTSI is a 35-item dichotomously (yes/no) scored self-report instrument. The instrument assessed participants' experiences during the Liberian war. The WTSI, unfortunately, has not yet undergone any psychometric evaluations. In a personal communication (January 7, 2016), the lead author of the instrument suggested that to conceptualize the construct, there is the need to think of trajectories of adjustment over time and the different labels assigned to these trajectories. On a cursory look, the items were grouped under (a) direct physical injury and life

threat, (b) threat and harm to loved ones, (c) visual experiences of the war, (d) traumatic bereavement, and (e) displacement and/or separation from loved ones, to help provide descriptive analysis of participants' war-related experiences.

An exploratory factor analysis using SAS was performed to examine if the 35 items in the scale clustered under any of the aforementioned groups (O'Rourke & Hatcher, 2013). Thereafter, a construct validation was performed on the newly acquired factors to identify if they fit a theoretically-test confirmatory factor structure (O'Rourke & Hatcher, 2013). Finally, information from the confirmatory factor analysis informed their addition to the final structural equation modeling (SAS, 1985; Schumacker & Lomax, 2010).

#### Posttraumatic Stress Disorder Checklist for DSM-5

There were many instruments to assess the posttraumatic stress disorder level of participants (e.g. *PTSD Symptom Scale – Self Report*; Foa, Riggs, Dancu, & Rothbaum, 1993, *Post-Traumatic Stress Disorder Scale*; Davidson, Smith, & Kudler, 1989). However, due to the recent re-classification of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; APA, 2013), the *Posttraumatic Stress Disorder Checklist for DSM-5* (PCL-5; Weathers et al., 2013) was selected on account of its alignment with current literature on trauma and post-traumatic stress disorder, especially in dealing with non-western populations.

The PCL-5 is a 20-item self-report Likert-type measure that evaluates the degree to which an individual has been bothered in the past month by posttraumatic stress symptoms tied to his or her most currently distressing event (Weathers et al., 2013). PCL-5 has four factors that correspond with PTSD symptom clusters or criteria in the *DSM-5*. The first factor, “intrusion,” is evidenced by recurrent, involuntary, and intrusive distressing memories of the



traumatic event. The second factor is “avoidance” and is evidenced by efforts to avoid distressing memories, thoughts or feelings about the event. The third factor is “negative alterations in cognition and mood,” and is characterized by dissociative amnesia or inability to remember important aspects of the event, feelings of detachment, persistent and distorted thinking patterns about causes and/or consequences of the event, and persistent and exaggerated negative beliefs about oneself or others. The fourth factor is “alterations in arousal and reactivity,” and is characterized by hypervigilance, problems with concentration, reckless or self-destructive behaviors, and sleep disturbances. Subscale severity scores were calculated by summing items in each of the four *DSM–5* PTSD symptom clusters: *intrusions* (Items 1–5), *avoidance* (Items 6–7), *negative alterations in cognitions and mood* (Items 8–14), and *alterations in arousal and reactivity* (Items 15–20).

Items are rated from 1 (*not at all*) to 4 (*extremely*) and are summed for a total severity score. Items in the scale were revised to make it relevant to the war experience. Some examples in the scale included, “avoid memories, thoughts, or feelings related to the war experience”; “suddenly feeling or acting as if the war experience were actually happening again (as if you were actually back there reliving it)”. Scores on PCL-5 range from 0 – 80 ( $M = 42.41$ ,  $SD = 15.06$ ) with psychometric properties indicating strong Cronbach alpha ( $\alpha = .91$ ; test-retest reliability,  $\alpha = .95$ ; Wortmann et al., 2016). Inter-item correlations for the PCL-5 fell in the recommended range of .15 to .50, with a range of .10 to .74 (Clark & Watson, 1995) similar to that of the Liberian sample under investigation ( $M = 53.15$ ,  $SD = 18.85$ , inter-item correlation range of .17 to .62).

### Religious Commitment Inventory

The *Religious Commitment Inventory* (RCI-10, Worthington et al., 2003) was found more appropriate because of the nature of participants (i.e. Muslims, Christian, African Traditionalists), and not one skewed towards one particular religious orientation. RCI-10 assesses the degree to which a person stands up for his or her religious values as well as practices. The scale measures the extent to which people follow their religious beliefs, practices, and values.

The RCI-10 is a ten-item Likert-type scale that ranges from 1 (not at all true of me) to 5 (totally true of me). Sample items include “I often read books and magazines about my faith,” and “Religious beliefs influence all my dealings in life.” The scale has two sub-scales, intrapersonal religious commitment (Items 1, 3, 4, 5, 7 and 8) and interpersonal religious commitment (Items 2, 6, 9, and 10). In previous studies using university students ( $n = 710$ ), the normative mean was found to be 23.1 ( $SD = 10.2$ ).

Internal consistency of the RCI-10 indicated strong internal reliability ( $\alpha > .92$ ) with an adequate three-week test-retest reliability ( $\alpha = .87$ ) in various religious sub-samples (e.g. Christians, Muslims, Buddhists, Jews). Construct validity correlations ranged from .67 to .84 (Worthington et al., 2003). The Cronbach alpha for the RCI-10 subscales are .94 for interpersonal religious commitment and .92 for intrapersonal religious commitment.

The instrument developers advise that the scales are highly inter-correlated, thus for use in clinic and research purposes, a full scale instead of subscales should be used. A total score is the sum of each of the ten items. Means for the full-scale for secular samples are between 21 and 26 ( $SD$  between 10 and 12). People scoring more than one  $SD$  above the mean should be

considered highly religious, otherwise, a person would be considered highly religious if his or her total full scale score is 38 and above (Worthington, 1988).

### Revised Life Orientation Test

Optimism was measured with the *Revised Life Orientation Test* (LOT-R, Scheier, Carver, & Bridges, 1994), a measure that assesses a person's level of optimism. LOT-R is a ten-item Likert-type scale measured on a five-point scale from 0 (strong disagree) to 4 (strongly agree). Sample items in this scale are "it is easy for me to relax", "if something can go wrong for me, it will". Three items (3, 7, and 9) are negatively worded and have to be reverse coded before a total score can be obtained. Four items (2, 5, 6, and 8) are fillers and thus not included in calculating the total scores. Thus, to compute a total LOT-R is to sum items 1, 4, 10, reverse item 3, reverse item 7, and reverse item 9.

In a study assessing the accuracy of the LOT-R in measuring dispositional optimism ( $n = 484$ ), Chiesi and her colleagues (2013) confirmed that the 1-factor structure of the scale does indeed measure dispositional optimism. The investigators employed the *Item Response Theory* (IRT) analyses for the six items included in the total score of LOT-R. Each of the items had discrimination alpha, as well as category threshold beta scores able to discriminate well among people of varying levels of measured traits. The means of all six items were between 3.27 and 3.81 ( $1.07 \geq SE \leq 1.28$ ). There were four beta thresholds with their standard errors; the first  $\beta$  threshold ranged between -2.81 and -1.87 ( $0.14 \geq SE \leq 0.27$ ). The second  $\beta$  ranged between -1.49 and -0.71 ( $0.08 \geq SE \leq 0.12$ ). The third  $\beta$  ranged between -0.45 and -0.02 ( $0.07 \geq SE \leq 0.09$ ). Finally, the fourth  $\beta$  ranged between 0.61 and 1.55 ( $0.09 \geq SE \leq 0.16$ ). The figures confirmed

the LOT-R scale's ability to discriminate between individuals with different levels of dispositional optimism.

In a more recent study (Cano-García et al., 2015) with Spanish participants ( $n = 906$ ; age range = 18-61 years;  $M_{\text{Age}} = 23.53$ ;  $SD = 6.62$ ; 56% males), the researchers used the polychoric correlations to perform a confirmatory factor analyses on the LOT-R. In using the polychoric correlations, the researchers treated this ordinal scale as is, and not forced to take on an interval measure like is often done in studies that use the Pearson correlations. Results of this study indicated an acceptable Cronbach's alpha ( $\alpha = .73$ ) and average discrimination index of 0.48. The best model fit confirmed Chiesi and colleagues' (2013) one factor loading with fit indices to support the data ( $\chi^2 = 34.30$ ;  $df = 9$ ;  $RMSEA = .056$ ;  $CFI = .96$ ). The results further confirmed the unidimensionality of the LOT-R scale (a single dimension from a positive to a negative continuum in life orientation).

#### Posttraumatic Growth Inventory

The *Post Traumatic Growth Inventory* (PTGI; Tedeschi & Calhoun, 1996) measured participants' level of posttraumatic growth. The PTGI is a 21-item Likert-type self-report scale which is scored on a six-point scale from 0 (I did not experience this change as a result of my crisis) to 5 (I experienced this change to a very great degree as a result of my crisis). Items in the scale include "I have a greater feeling of self-reliance", "I know better than I can handle difficulties".

The PTGI measures growth over five domains. The first, *relating to others*, speaks to participants' interpersonal relationships after a traumatic experience. The second, *new possibilities*, addresses participants' ability to see post-traumatic possibilities that they would

normally not have seen. The third, *personal strength*, recognizes the strength despite the traumatic experience. The fourth, *spiritual change*, indicates either an increase or decrease of spirituality due to the traumatic experience. The final factor, *appreciation of life*, addresses the gratitude for life.

Psychometric properties for the PTGI indicate a high internal consistency ( $\alpha = .90$ ; Tedeschi & Calhoun, 1996). There was substantial internal consistency for each of the five factors: new possibilities ( $\alpha = .84$ ), relating to others ( $\alpha = .85$ ), personal strength ( $\alpha = .72$ ), spiritual change ( $\alpha = .85$ ), appreciation of life ( $\alpha = .67$ ). Furthermore, corrected item-total correlations were in a moderate range ( $.35 \geq r \leq .63$ ). A test-retest reliability over two months ( $n = 28$ ) exhibited acceptable reliability ( $r = .71$ ). Test-retest reliabilities for the factors except personal strength ( $r = .37$ ) and appreciation of life ( $r = .47$ ) ranged between .65 to .74.

To assess concurrent validity, PTGI was correlated with the *Life Orientation Test* (LOT; Scheier & Carver, 1985) which assesses optimism. Concurrent validity scores were acceptable for each of the factors (relating to others = .14; new possibilities = .22; personal strength = .22, spiritual change = .17, appreciation of life = .15; and the total PTGI = .23). Finally, the researchers performed discriminant validity using the NEO Personality Inventory (Costa & McCrae, 1992). Results from the discrimination index indicated that there were many relationships among PTGI, PTGI factors, and personality (Tedeschi & Calhoun, 1996). The PTGI had a positive correlation with optimism ( $r = .23$ ), religiosity ( $r = .25$ ), and all other dimensions of personality (Extraversion:  $r = .29$ ; Openness:  $r = .21$ ; Agreeableness:  $r = .18$ ; Conscientiousness:  $r = .16$ ) except neuroticism.

In analyzing the data for this study under investigation, posttraumatic growth was used as a dependent variable, while the independent variables consisted of the other constructs (i.e. posttraumatic stress disorder, religious commitment, and optimism). The next chapter addresses how the interplay of the dependent and independent variables produced results interpretable to be consumed by the body of knowledge.

### Data Collection

Permission was sought from each of the instrument developers (PTGI, Tedeschi & Calhoun; RCI-10, Worthington; PCL- Yoder; LOT-R, Scheier, and WTSI, Layne). After permission was granted, institutional permission was sought from and granted by the University of Central Florida's *Institutional Review Board* in October, 2015 allowing the study to take off.

In the second week of November 2015, data collection started in Monrovia, Liberia. Churches, schools, and communities were contacted and the study explained. The Dean of the School of Agriculture at the University of Liberia, was very much interested in the study, especially in the study's possible future recommendations for trauma healing interventions for Liberians. He therefore suggested that since many of his students came from the length and breadth of Liberia, they will be a great cross-section of the average Liberian who either fled the war or took part as child soldiers or as rebel faction adult militants.

Data collection therefore took place mostly in group format, where students who were willing to take part in the study stayed behind after classes. Informed consent was done in a group format after giving each possible participant the informed consent form and explaining the nature of the study to them. In some groups, participants wanted the reassurance that the study

was not going to harm them individually or as a nation by taking false reports beyond the borders of Liberia. After several reassurances, those who were satisfied stayed behind and completed the research package. The researcher also indicated on their chalk board how the Likert-type scale works, in an effort to explain to those who had not done anything like that before how they could scale their experiences and/or emotions with the numbers. Thus, data collection took place from the second week of November to the second week of December. Every day (Sunday to Saturday) was a data collection time depending on where the groups indicated they were ready. Thus, for students, data collection in groups took place from Monday to Friday, and for societies and churches, data collection took place Saturday and Sunday.

A limitation to this form of data collection was that, because there was communication among participants as well as between participants and researcher, reliability could become questionable. Specifically, some sentences were read aloud so participants in group format could move together in a uniform manner. Also, some participants shared stories and exchanged information about their experiences, which could influence the way others answered their own questions.

However, there were a few participants who wanted to complete the study by themselves and bring them over when they were ready. These groups were also allowed to do what was convenient for them. Moreover, to ensure the mental health needs of participants had been addressed, five local pastors made themselves available to speak with any participant who may have had concerns because of the recall of memories from the war. Asking local pastors to make themselves available is in line with earlier studies in African countries that recognized the non-existent or informal mental health systems (Van Dyk & Nefale, 2005). Thus, traditional healers

and pastors provide mental health services to people of the community, in much the same way that psychologists and mental health professionals provide psychological help to people in countries with well-structured mental health systems.

Finally, upon consultation with some community leaders and professors in the university, the \$5 incentive was given to participants after the return of the research package (LaRose & Tsai, 2014; Mercer, Caporaso, Cantor & Townsend, 2015; Warriner, Goyder, Gjertsen, Hohner, & McSpurren, 1996) which was put in a sealed white envelope to indicate culturally appropriate show of respect.

After data collection, all the data were entered into SPSS (IBM, 2011). Of the 500 research package given out, 444 were returned, indicating an 88.8% response rate. After entering the data into SPSS, data were checked for missing values and treated accordingly (see chapter 4; Tsikriktsis, 2005) before analysis began. Furthermore, correlation and covariance matrices were extracted from SPSS before using them as baseline for further analyses (i.e., confirmatory factor analysis and structural equation modeling) in both SAS (SAS, 1985) and LISREL (Jöreskog, & Sörbom, 1993).

### Data Analysis

Data was analyzed with three statistical programs – SPSS, SAS, and LISREL. The SPSS statistical software was used in data cleaning, correlational studies to analyze the research hypotheses, and both parametric and non-parametric tests to analyze group differences for the exploratory research questions. The SAS statistical package was used for confirmatory factor analyses for four of the instruments – PTGI, LOT-R, RCI, and PCL-5. An exploratory factor



analysis and confirmatory factor analysis were performed to validate the WTSI since that instrument did not have any psychometric properties, and permission had been sought from the instrument developer to explore those options. Finally, both LISREL 9.2 and SAS were used to perform the structural equation model that tested the final hypothesized model (Fan & Sivo, 2005; Fan & Sivo, 2007; Fan & Sivo, 2009; O'Rourke & Hatcher, 2014; Sivo, Fan, Witta, & Willse, 2006). Furthermore, LISREL 9.2 provided the pictorial representation of the hypothesized model.

### Conclusion

Chapter three provided a road map for the collection of data. The chapter also explained the instruments used as well as their psychometric properties, bringing out their versatility in its application to a non-western sample. Finally, the statistical packages used in analyzing the data were described. The next chapter describes in detail the tests performed, why they were performed, and the results that came out of the performance, as well as limitations that confounded the study.

## CHAPTER FOUR: RESULTS

Chapter four lays out the results of the examined research hypotheses and exploratory questions. The study investigated the effect of war-related trauma (as measured by the *War Trauma Screening Index* [WTSI; Layne, Stuvland, Saltzman, Djapo, & Pynoos, 1999] and the *Post-Traumatic Stress Disorder Checklist for DSM-5* [PCL-5, Weathers, Litz, Keane, Palmieri, Marx, & Shnurr, 2013], religious commitment (as measured by the *Religious Commitment Inventory* [RCI-10, Worthington et al., 2003]), and optimism (as measured by the *Revised Life Orientation Test* [LOT-R, Scheier, Carver, & Bridges, 1994]) on posttraumatic growth (as measured by the *Post-Traumatic Growth Inventory* [PTGI, Tedeschi & Calhoun, 1996]) in adult Liberian former refugees and internally displaced persons (IDPs). It was hypothesized that increased war-related trauma would positively influence posttraumatic stress and negatively affect posttraumatic growth. Furthermore, increased religious commitment and optimism would positively influence posttraumatic growth in traumatized former refugees and IDPs. Additionally, exploratory research questions were examined concerning trauma, religious commitment, optimism, and posttraumatic growth, with reported demographic information of adult Liberian former refugees and IDPs (e.g. displacement status, gender, age, educational qualification, and reaction to the Ebola epidemic).

The research hypotheses were analyzed using the structural equation modeling (SEM) statistical technique. The SEM is a tool that integrates components of multivariate regression procedures, path analysis, and confirmatory analysis (Byrne, 2009; O'Rourke & Hatcher, 2013; Schumacker & Lomax, 2010). The descriptive, correlational research design was used to examine the variables under study (posttraumatic growth, posttraumatic stress, optimism, and

religious commitment) in terms of their associations and predictive powers (Fraenkel & Wallen, 2003). Furthermore, the exploratory research questions were analyzed specifically using multiple regressions, factorial ANOVAS and ANCOVA (Field, 2013; Lomax & Hahs-Vaughn, 2012; Tabachnick & Fidell, 2013). The subsequent sections present (a) the data cleaning procedures (b) descriptive statistics of participants (c) reliability of instruments, (d) construct validation of instruments, (e) analysis of the hypotheses, (f) description of exploratory research questions, and (g) limitations of the study. Prior to analyzing the data, data screening and cleaning were undertaken to ensure the raw data to be used were stripped off any controllable errors.

#### Data Cleaning and Screening

In many empirical studies, especially those dealing with larger number of respondents (O'Rourke & Hatcher, 2013) and responses, missing data become a common issue (Tsikritsis, 2005). Missing data negatively affect statistical power (Roth, 1994) and may result in biased estimates (e.g. measures of central tendency, measures of dispersion, correlation coefficient; Tsikritsis, 2005). One needs to assess how much of the data is missing and whether the pattern of missing is random, non-random, or completely at random. A cut-off of 5% or more missing data is deemed concerning (Tabachnick & Fidell, 2013). When data is *missing at random* (MAR), it means missing items differ only by chance from those items not missing. However, when data is *not missing at random* (NMAR), there is a relationship between the missing and non-missing items, and these missing values have to be understood before they are interpreted (Tsikritsis, 2005). Finally, when data is *missing completely at random* (MCAR), it means

missing items differ only by chance, and its presence or absence is unrelated to the scores on other variables in a particular data set.

Researchers have identified several ways of diagnosing for randomness of missing data. For this study, inspection of the descriptive statistics was undertaken to see if any missing data existed and whether they met the  $\geq 5\%$  cut off score. None of the variables met the cut off score and thus data analyses was undertaken. However, had there been any concerning items, there would have been available techniques to undertake – deletion (e.g. listwise deletion, pairwise deletion), replacement-based mean substitution, total mean substitution, subgroup mean substitution, case mean substitution, regression imputation, hot-deck imputation, model-based maximum likelihood, and expected maximization (for details on what each procedure means, see Tsikritsis, 2005).

After checking to ensure data missing were less than the  $\geq 5\%$  set criteria, data were finally checked against statistical assumptions being used. Thus, all analyses were checked against assumptions pertaining to each statistical analysis performed (e.g. normality, linearity, homoscedasticity).

#### Missing Data in Instruments for Sample Under Investigation

Missing values for *Post Traumatic Growth Inventory* (PTGI, Tedeschi & Calhoun, 1996) with the current participants ranged from 1.1% to 2.9%, less than the 5% cut off. Inspection of the items in the *Revised Life Orientation Test* (LOT-R; Scheier, et al., 1994) indicated missing data ranged from 0.2% to 0.5%. The *Religious Commitment Inventory* (RCI-10, Worthington et al., 2003) had a 0.2% missing data. The *War Trauma Screening Index* (WTSI, Layne et al., 1999) had missing data ranging from 0.2% to 2.0%. The *Post Traumatic Stress Checklist for*

*DSM-5* (PCL-5; Weathers et al., 2013) had a 0.2 – 2.9% range of missing data. None of these instruments met the concerning cut off criteria.

Finally, inspection of the demographic data indicated that of the 15 questions asked, four of the questions (7, 8, 9, and 10) produced missing data between 5% to 34%. It would have been concerning but closer inspected revealed that the missing data was connected to the way the questions were framed. Thus, if a participant indicated he or she was unemployed, they could not fall within any monthly income range (Q9, 34%). Additionally, if they were unemployed, they could not be in any working sector (Q10, 31.1%). Respondents who were internally displaced during the war were likely to have overlooked the prompt about leaving their homes but staying within Liberia (Q7, 5%); and would have assumed because they were within Liberia, they did not have to answer the question about the number of years since their return (Q8, 10%). Thus, none of the suggested forms of replacing missing values was undertaken to make up for the missing items. A recommendation for future paper-and-pencil study would be to indicate a prompt that allows participants to skip questions that are not applicable and answer the next applicable question.

### Descriptive Data Analysis

#### Demographic Data

A detailed demographic information is essential especially in studies where sampling method is non-random, to allow consumers of research the ability to situate the results within the parameters of the demographic information (Fraenkel & Wallen, 2003). Furthermore, detailed demographic information helps with replication studies, which makes generalizability probable.

Of the 500 participants sampled, 444 returned their completed research package, providing an 88.8% response rate, had the sampling method been the random type (Huemer et al., 2013; Jia et al., 2014; Powell et al., 2003; Sink & Mvududu, 2010), and consistent with studies that embarked on face-to-face or group data collection modalities.

Participants answered 15 questions within the demographic questionnaire. Questions included gender, age, family status, educational qualification, displacement status during the war, self-report religiousness, religious commitment level, year since repatriation, and reaction to the recent Ebola epidemic (see Table 1). Because of rounding, percentages in this table may not total 100. Missing data for the first question was 141 (31.8%), mostly due to the fact that it was a later addition to the data collection process. However, because it was not a major question that significantly affected the rest of the analysis, no statistical analysis was thus performed to replace the missing variables (Tabachnick & Fidell, 2013; Tsikritsis, 2005).

Liberia is divided into 15 counties; each of the 15 counties has a capital. The physical effects of the war were brutal in some counties than others, leading to exodus from and to other counties. The counties and their capitals are *Bomi* (Tubmanburg), *Bong* (Gbarnga), *Gbarpolu* (Bopolu), *Grand Bassa* (Buchanan), *Grand Cape Mount* (Robertson), *Grand Gedeh* (Zwedru), *Grand Kru* (Barclayville), *Lofa* (Voinjama), *Margibi* (Kakata), *Maryland* (Harper), *Montserrado* (Bensonville), *Nimba* (Sanniquelle), *River Cess* (Cestos City), *River Gee* (Fish Town), and *Sinoe* (Greenville). Monrovia, the capital of Liberia is in the Montserrado County, and is home to the majority of the participants (see Table 1).

The majority of the participants resided in the Montserrado County (29.3%) prior to the war, and many more migrated after the war (57.5%). The results are unsurprising since the

Monstserrado County houses the seat of government and therefore majority of jobs and the site of the data collection. Of the nine people who resided in the Bomi County before the war, only one went back after the war. Similarly, the 34 who resided in the Bong County before the war dwindled till only eight were current residents. Gbarpolu residents were five before the war and one after the war. Grand Bassa had seven residents before the war and three after the war. Grand Cape Mount (2), Grand Gedeh (4), Grand Kru (1), and Maryland (8) all had people migrating from the counties before the war and not going back after the war. Residents in Lofa county were 47 before the war and six after the war, those in Nimba were 27 before the war and three after the war, and Sinoe County reported five before the war and only one after the war. Surprisingly, residents of Margibi County were 24 before the war and increased to 26 after the war. The question about the exodus during and after the war provides an insight into possible counties for intervention studies that will address strategies for clinical work (e.g., trauma counseling).

The question of age was ranked with a range from 20 years to 60 years and above. The majority of the participants (45.7%) were in the 31-40 year rank. This number would have been surprising if the students were traditional students. However, because many of the participants had to put their education on hold because of the war, many of them, though, students, are the non-traditional type. The next highest age range (26.8%) were those in the 20-30 year rank, followed by 41-50 years (20.5%), 51-60 years (5.2%), and 60 years and above (1.6%).

The majority of the participants were male (70.9%) even though the national demographics indicates an almost 50-50 split between genders (UN, 2016; World Bank, 2016). A chi square test statistic indicated that the gender make-up of this sample is different from the

gender make-up of the Liberian population to a statistically significant degree ( $\chi^2 = 78.937$ ,  $df = 1$ ). This could be attributed to the fact that data collection was done mostly with college students in the school of agriculture, where the majority of students are males.

Many of the participants self-reported as single (42.3%) with married (30.0%) and living with partners (23.6%) following closely behind. A few were widowed (1.6%) and divorced (1.8%), and fewer yet separated (0.2%). The majority of the participants had between one to two children (49.3%), followed by those with between three to four children (22.1%), those with none (17.3%), and those with five or more children (11.0%). Participants shared that in their traditional cultural practices, they could take on children of deceased relatives as their own, thus consumers of the nature of these questions in the African context have to be aware of how the African perceives the concept of the number of children. A way of preventing a similar confusing turn of events would be to specifically ask participants of the number of children they have borne themselves.

Since most of the data collection occurred on a university campus, it is not surprising that the highest educational qualification of majority of the participants was high school (48.0%) and associate degrees (12.4%) since many of the participants were enrolled in various undergraduate programs at the time of the data collection. Some of the participants had already obtained their bachelor's degree (19.4%), post-graduate (6.5%), and professional degrees (7.7%). A few however had a trade school certification (5.6%) and elementary (0.2%) as their highest educational qualification.

The majority of the participants were unemployed (63.7%) and therefore did not earn any income. Of those who were employed, the majority (34.0%) earned less than 5000 Liberian



dollars (LD) a month, an equivalent of about US\$720 a year. This was followed by those who earned between LD5,000-10,000 (18.0%), then LD10,001 – LD15,000 (17.0%). Others however, earned more than LD30,001 (14.0%) with ranges in between (LD15,001-LD20,000, 7.0%; LD20,001-LD25,000, 6.0%; LD25,001-LD30,000, 4.0%). Moreover, of those who were employed, the majority were self-employed (27.5%) and engaged in petty trade. Some worked for the government in various non-education settings (10.4%), others in education (16.2%), some in the private sector (8.3%), Non-Government Organizations (NGOs; 4.1%), and others in various religious organizations (2.5%).

The question on displacement revealed that the majority of the participants (89.2%) left their homes because of the war. The majority became internally displaced (60.4%) followed by those who fled to their neighboring francophone countries (19.8%), while others went to their neighboring Anglophone (9.5%) countries. Some went to multiple countries (3.8%), while a few sought refuge in Central, Eastern, and Southern Africa, and Europe (1.1%). Even though many Liberians are still coming back home, the majority of participants (48.4%) have repatriated for 10 years and more. Naturally, the next repatriated majority are those who have been home for between seven and nine years (14.9%), followed by four to six years (9.9%), then one to three years (8.6%).

Concerning their reported level of religiousness, the majority of the participants (99.0%) saw themselves as religious, specifically, Christian (93.2%), Muslim (6.1%), and African Traditionalists (0.2%). There were no other religious groups that participants self-reported as being members of. A large number of participants (80.0%) admitted they were involved in their religious practices one or more times a year. A few admitted their involvement was once every

month (12.4%), and one or two times a year (7.2%). Some however, admitted they were not involved in any religious practices (0.5%).

To assess the effect of the recent national Ebola epidemic that affected both the lives and the economy of the country (Awardy et al., 2015; Doucleff, 2015; Dulleh, 2015; Jordan, 2015), a question was asked to identify if participants made any comparison between the trauma from the Ebola outbreak and the war-related traumatic experiences. Majority of the participants (65.8%) admitted they compared the war to the Ebola one or more times a day. Some compared the two incidents once or twice a week (13.1%), others once a while (13.7%) and some never made that comparison (6.3%). This question was important as it helped in a way to draw parallels to persisting trauma reported in a population whose traumatic experiences had lapsed for over a decade. Realizing that the effect of the Ebola outbreak could re-traumatize participants helped to understand their scores on the posttraumatic stress disorder scale.

**Table 1. Demographic Variables of Participants**

<b>Narrative</b>	<b>Frequencies and Percentages</b>
County of Residence before the War ( $M = 8.79$ , $SD = 3.48$ )	
Bomi	9 (2.0%)
Bong	34 (7.7%)
Gbarpolu	5 (1.1%)
Grand Bassa	7 (1.6%)
Grand Cape Mount	2 (0.5%)
Grand Gedeh	4 (0.9%)
Grand Kru	1 (0.2%)
Lofa	47 (10.6%)

Narrative	Frequencies and Percentages
Margibi	24 (5.4%)
Maryland	8 (1.8%)
Monteserrado	130 (29.3%)
Nimba	27 (6.1%)
Sinoe	5 (1.1%)
County of Residence after the War ( $M = 10.43$ , $SD = 1.85$ )	
Bomi	1 (0.2%)
Bong	8 (1.8%)
Gbarpolu	1 (0.2%)
Grand Bassa	3 (0.7%)
Lofa	6 (1.4%)
Margibi	26 (5.9%)
Monteserrado	256 (57.7%)
Nimba	3 (0.7%)
Sinoe	1 (0.2%)
Age ( $M = 2.09$ , $SD = 0.90$ ):	
20-30 years	119 (26.8%)
31-40 years	203 (45.7%)
41-50 years	91 (20.5%)
51-60 years	23 (5.2%)
60 years and above	7 (1.6%)
Gender ( $M = 0.29$ , $SD = 0.45$ ):	
Male	315 (70.9%)
Female	128 (28.8%)
Marital status ( $M = 2.35$ , $SD = 1.60$ ):	
Single	188 (42.3%)
Married	133 (30.0%)

Narrative	Frequencies and Percentages
Widowed	7 (1.6%)
Divorced	8 (1.8%)
Living with a partner	105 (23.6%)
Separated	1 (0.2%)
Number of children ( $M = 2.27$ , $SD = 0.88$ ):	
None	77 (17.3%)
1-2	219 (49.3%)
3-4	98 (22.1%)
5 or more	49 (11.0%)
Educational Qualification ( $M = 3.98$ , $SD = 1.48$ ):	
Elementary	1 (0.2%)
Trade School	25 (5.6%)
High School	213 (48.0%)
Associate Degree	55 (12.4%)
Bachelor's	86 (19.4%)
Professional Degree	34 (7.7%)
Post-graduate	29 (6.5%)
Are you employed ( $M = 0.64$ , $SD = 0.48$ ):	
Yes	283 (63.7%)
No	160 (36.0%)
Sector/Area of Employment ( $M = 3.76$ , $SD = 2.11$ ):	
Education	72 (16.2%)
Private Sector	37 (8.3%)
Government	46 (10.4%)
Religious Group	11 (2.5%)
NGO	18 (4.1%)
Self-employed	122 (27.5%)

Narrative	Frequencies and Percentages
Monthly Income in Liberian dollars ( $M = 3.01$ , $SD = 2.12$ ):	
(US\$1 = LD84.66)	
Less than 5,000	99 (34.0%)
5,000-10,000	54 (18.0%)
10,001-15,000	51 (17.0%)
15,001-20,000	19 (7.0%)
20,001-25,000	16 (6.0%)
25,001-30,000	12 (4.0%)
More than 30,001	42 (14.0%)
Did you leave your home because of the war? ( $M = 0.89$ , $SD = 0.31$ )	
Yes	
No	396 (89.2%)
	47 (10.6%)
Where displacement occurred ( $M = 4.77$ , $SD = 2.18$ ):	
IDP	268 (60.4%)
English West Africa	42 (9.5%)
French West Africa	88 (19.8%)
Central/East/Southern Africa and Europe	6 (1.1%)
Multiple countries	17 (3.8%)
Duration of return ( $M = 3.97$ , $SD = 1.36$ ):	
Less than 1 year	36 (8.1%)
1-3 years	38 (8.6%)
4-6 years	44 (9.9%)
7-9 years	66 (14.9%)
10 or more years	215 (48.4%)
Do you see yourself as a religious person ( $M = 0.99$ , $SD = 0.11$ ):	

Narrative	Frequencies and Percentages
Yes	438 (99.0%)
No	5 (1.0%)
Religious affiliation ( $M = 1.07$ , $SD = 0.26$ ):	
African Traditional Religion	1 (0.2%)
Christianity	414 (93.2%)
Islam	27 (6.1%)
Involvement in religious practices ( $M = 2.72$ , $SD = 0.62$ ):	
Never	2 (0.5%)
1 or 2 times a year	32 (7.2%)
Once every month	55 (12.4%)
1 or more times a week	353 (80.0%)
Comparing the Ebola outbreak to the war ( $M = 2.40$ , $SD = 0.95$ ):	
Never	28 (6.3%)
Once a while	61 (13.7%)
Once or twice a week	58 (13.1%)
1 or more times a day	292 (65.8%)

### Reliability of Instruments

Reliability studies were undertaken to ensure that results represented the population under study, and were consistent over time (Gall et al., 2007). Reliabilities are properties of the instruments used; it is a function of correlations. A high reliability indicates that items within the scale resonate significantly with participants answering the questions. Thus, even though the instruments were normed on a certain group of people, when reliability scores are high, there is an indicating that the items within the scale are resonating with the new participants as it did with the normed group.

### Post-Traumatic Stress Disorder for DSM-5

The *Posttraumatic Stress Disorder Checklist for DSM-5* (PCL-5, Weathers et al., 2013) is a 20-item Likert-type scale that measures posttraumatic stress symptomatology. Cronbach's alpha for the 20 items yielded a high internal consistency ( $\alpha = .853$ ) for the Liberian sample.

**Table 2. Reliability for PCL-5 within Liberian Sample**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.853	.905	20

PCL-5 has four subscales that correspond with DSM-5's clusters B, C, D, and E. Cluster B, also known as the "intrusions" subscale, consists of the first to the fifth items. Reliability statistics for this cluster in the Liberian sample yielded a barely acceptable Cronbach's alpha ( $\alpha = .512$ ). Inspection of the item total statistics table indicated that Cronbach's alpha would increase from 0.512 to 0.825 if the fifth item (Having strong physical reactions when something reminded you of the war experience) is deleted. Deleting the item increased the alpha by 31.3%, moving the figure from a barely acceptable range to a high range.

**Table 3. Reliability for Intrusion Subscale**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.825	.824	4

Reliability statistics under cluster C subscale, also known as "avoidance" (items 6, and 5) yielded an acceptable Cronbach's alpha ( $\alpha = .691$ ).

**Table 4. Reliability for Avoidance Subscale**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.691	.691	2

Reliability statistics under cluster D subscale, also known as negative alterations in cognitions and mood (NACM; items 8, 9, 10, 11, 12, 13, and 14) yielded a high Cronbach's alpha ( $\alpha = .803$ ).

**Table 5. Reliability for NACM Subscale**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.803	.805	7

Reliability statistics under cluster E subscale, also known as “alterations in arousal and reactivity (AR; items 15, 16, 17, 18, 19, and 20) yielded a high Cronbach's alpha ( $\alpha = .782$ ).

**Table 6. Reliability for AR Subscale**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.782	.810	6

#### Religious Commitment Inventory

Religious Commitment Inventory (RCI-10; Worthington et al., 2003) is a ten-item Likert-type scale. Internal reliability for the Liberian sample was high ( $\alpha = .847$ ).



**Table 7. Reliability for RCI-10 within Liberian Sample**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.847	.849	10

The scale has two sub-scales, intrapersonal religious commitment (1, 3, 4, 5, 7 and 8) and interpersonal religious commitment (2, 6, 9, and 10). Internal consistency for the intrapersonal religious commitment was acceptable ( $\alpha = .766$ ).

**Table 8. Reliability for Intrapersonal Religious Commitment**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.766	.771	6

Internal consistency for interpersonal religious commitment was also within an acceptable range ( $\alpha = .758$ ).

**Table 9. Reliability for Interpersonal Religious Commitment**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.758	.761	4

#### Revised Life Orientation Test

The next scale of interest was the Life Orientation Test, Revised (LOT-R; Scheier, Carver, & Bridges, 1994), which is a 10-item Likert-type scale. In the interpretation of this instrument, items 3, 7 and 9 have to reverse coded. A total LOT-R scale consists of only six items (1, reverse of 3, 4, reverse of 7, reverse of 9, and 10) out of the 10 because four of the

items are fillers. However, to compute the Cronbach alpha, all 10 items were inputted into the analysis to produce a high internal consistency ( $\alpha = .764$ ). Psychometric properties for the original instrument (Scheier et al., 1994) were moderate with Cronbach alpha between .68 and .74.

**Table 10. Reliability for LOT-R within Liberian sample**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.764	.626	10

#### Post-Traumatic Growth Inventory

In processing the responses for the reliability studies, SPSS excluded 48 cases due to missing values. Thus, only 396 cases were valid for the analysis. Psychometric properties for the scale developed for western samples had a high internal consistency ( $\alpha = .93$ ), and an acceptable test-retest reliability and construct validity.

A reliability analysis was performed for all 21 items of the Post Traumatic Growth Inventory (PTGI, Tedeschi & Calhoun, 1996) from the Liberian sample. The results produced a very high internal consistency ( $\alpha = .932$ ). The standardized Cronbach's alpha (Spearman-Brown stepped-up reliability coefficient) which indicates the Cronbach's alpha when all the items that make up the scale are standardized to a variance of 1 was also high ( $\alpha = .935$ ). The means of all the items ( $2.72 \geq M \leq 4.07$ ) and their accompanying standard deviations ( $1.3 \geq S.D. \leq 1.8$ ) indicated participants had average to high post-traumatic growth (Tedeschi & Calhoun, 1996).

**Table 11. Reliability for PTGI within Liberian sample**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.932	.935	21

A reliability analysis was thereafter performed for each of the factors (subscales) of the Post Traumatic Growth Inventory.

Factor I, *relating to others*, consisted of seven items (6, 8, 9, 15, 16, 20, and 21) and yielded a high Cronbach alpha ( $\alpha = .807$ ).

**Table 12. Reliability for Relating to Others**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.801	.807	7

However, to obtain a greater alpha level, item six was deleted (*I more clearly see that I can count on people in times of trouble*) and the reliability analysis rerun. Deleting item six was not surprising. Item six was a question that created quite an uproar, especially in the group data collection processes. Respondents indicated they could not trust people as much as they did before the war because of the horrific nature of betrayal from people they saw as friends or neighbors.

**Table 13. Item Total Statistics for Relating to Others**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
<i>I more clearly see that I can count on people in times of trouble</i>	22.41	45.380	.321	.152	.819
I have a greater sense of closeness with others	21.86	41.851	.581	.344	.766
I am more willing to express my emotions	21.83	43.707	.475	.236	.786
I have more compassion for others	21.50	43.170	.558	.398	.771
I put more effort into my relationships	21.59	42.434	.602	.436	.763
I learned a great deal about how wonderful people are	21.64	42.625	.580	.364	.767
I can better accept needing others	21.61	41.134	.667	.477	.751

The new internal consistency improved more than indicated in the “alpha if item deleted). After deleted item 6, the Cronbach alpha increased by 2.3% ( $\alpha = .824$ ).

**Table 14. Reliability for Relating to Others after Deleting Item 6**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.824	.826	6

Factor II, *new possibilities*, consisted of five items (3, 7, 11, 14, and 17). Internal consistency was in a high range ( $\alpha = .810$ ), with no need for any deletions.

**Table 15. Reliability for New Possibilities**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.810	.812	5

Factor III, *personal strength*, consisted of four items (4, 10, 12, and 19). Internal consistency was high ( $\alpha = .787$ ).

**Table 16. Reliability for Personal Strength**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.787	.789	4

Factor IV, *spiritual change*, consisted of two items (5, 18). Internal consistency was acceptable ( $\alpha = .706$ ).

**Table 17. Reliability for Spiritual Change**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.706	.711	2

Factor V, *appreciation of life*, consisted of three items (1, 2, and 13). Internal consistency was trivial ( $\alpha = 0.594$ ).

**Table 18. Reliability for Appreciation of Life**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.594	.609	3

However, inspection of the “alpha if item deleted” column in the item-total statistics table indicated that with the removal of item 1, the internal consistency would increase. Item one seems to be an item of concern with its mean and variation ( $M = 2.71$ ,  $SD = 1.89$ ) being the lowest in comparison to all other items. Item one was deleted and the reliability test rerun. Internal consistency improved by 0.039 to an acceptable level ( $\alpha = 0.633$ ).

**Table 19. Reliability for Appreciation of Life after Deleting Item 1**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.633	.635	2

The moderate to high internal consistencies of the instruments with the Liberian sample indicated that these western-based instruments were equally applicable in a non-western environment, proving their overall consistency as measures.

#### War Trauma Screening Index

The WTSI, though appropriate for the study under investigation, did not have psychometric properties. Thus, to ensure its ability to be included in the final model, an exploratory factor analysis as well as a confirmatory factor analysis were performed on the

instrument with the Liberian sample (O'Rourke & Hatcher, 2014). Prior to undertaking the psychometric tests on the scale, a descriptive statistics was performed to assess the extent of the experiences participants endured during the period of the war. The dichotomously scored scale elicited "yes/no" responses from the participants. The 35 items were grouped under (a) direct physical injury and life threat, (b) threat and harm to loved ones, (c) visual experiences of the war, (d) traumatic bereavement, and (e) displacement and/or separation from loved ones.

**Table 20. Descriptive Statistics of the War Trauma Screening Index**

Question	Yes	No
1. During the war, were you ever in a dangerous situation where you strongly believed you would be seriously hurt or killed?	358 80.6%	84 18.9%
2. Did a bullet ever come so close to you that you could have been seriously hurt or killed?	273 61.6%	170 38.3%
3. Did a grenade or bomb ever land so close to you that you could have been seriously hurt or killed?	193 43.5%	251 56.5%
4. Were you ever seriously hurt during the war?	110 24.8%	333 75.5%
5. Did anyone ever personally threaten to kill or seriously hurt you during the war?	250 56.3%	187 42.1%
6. Were you ever tortured during the war?	184 41.4%	256 57.7%
7. Were you ever raped or sexually molested during the war?	32 7.2%	407 91.7%
8. Were you ever taken prisoner or held in a detention camp during the war?	198 44.6%	243 54.7%
9. Were you ever deprived of food or water for so long that you strongly believed you were going to die?	243 54.7%	199 44.8%
10. Were you ever so cold during the war that you strongly believed you were going to die?	259 58.1%	182 41.0%

Question	Yes	No
11. During the war, did you eye witness someone being killed?	278 62.6%	166 37.4%
12. Did you see the body of someone who had been killed in the war? (Do not include funerals.)	389 87.6%	54 12.2%
13. Did you see someone being tortured during the war?	354 79.7%	89 20.0%
14. Did you see someone being raped or sexually molested during the war?	183 41.2%	257 57.9%
15. Did you touch or carry someone who had been wounded or killed in the war?	139 31.3%	296 66.7%
16. During the war, did you see a severely injured person before he/she received medical treatment?	335 75.5%	106 23.9%
17. During the war, did you witness a loved one being abducted or taken prisoner by the enemy?	217 48.9%	224 50.5%
18. Was your father killed in the war?	62 14.0%	380 85.6%
19. Was your mother killed in the war?	30 6.8%	414 93.2%
20. Was your brother or sister killed in the war?	122 27.5%	320 72.1%
21. Was a close relative killed in the war?	337 75.9%	105 23.6%
22. Was a close friend killed in the war?	286 64.4%	157 35.4%
23. During the war, was a loved one seriously injured?	207 46.4%	233 52.5%
24. During the war, was a loved one raped or sexually molested?	147 33.1%	295 66.4%
25. Was a loved one tortured during the war?	225 50.7%	214 48.2%



Question	Yes	No
26. Was a loved one ever taken prisoner or held in a detention camp during the war?	221 49.8%	218 49.1%
27. Was your home seriously damaged due to the war?	336 75.7%	107 24.1%
28. During the war, did enemy soldiers forcibly enter your home?	356 80.2%	87 19.6%
29. During the war, were you expelled from your home?	366 82.4%	74 16.7%
30. Were you forced to leave your village/town because of the war?	382 86.0%	57 12.8%
31. During the war, did a member of your immediate family serve in the military or another extremely dangerous occupation?	186 41.9%	257 57.9%
32. During the war, did a loved one have serious illness (cancer, heart attack) or chronic health problem?	221 49.8%	218 49.1%
33. During the war, did a loved one die due to causes unrelated to the war?	236 53.2%	207 46.6%
34. During the war, was a loved one missing, and you did not know whether they would ever return?	237 53.4%	206 46.4%
35. Did you get divorced because of the war?	39 8.8%	403 90.8%

### Direct physical injury and life threat

The majority of the participants (80.6%) admitted that during the war, they were in a dangerous situation where they believed they would be killed because a bullet came close to them (61.6%). Interestingly, 43.5% indicated a grenade or bomb came close to them during the war, meaning that the majority of the participants did not experience any grenades or bombs. This is consistent with literature, which indicates that of the 640 million small arms circulating in

the world, an estimated 100 million are found in Africa, and do play a major role in every political conflict (Amoa, 2006). Moreover, majority of the participants (75.5%) indicated they were not seriously hurt during the war. It is possible that those who were seriously hurt either died or were maimed in ways that made it impossible to enroll in college, from where majority of the participants for the study were sampled.

Concerning threat to life and shattering of their worldviews, majority of the participants (56.3%) admitted being personally threatened or seriously hurt during the war. Almost half of the participants (41.4%) admitted they were tortured during the war, and a small portion (7.2%) admitted they were raped and/or molested during the war. Is it possible that many of those who were raped died in the process or committed suicide due to the perceived disgrace (Schneider, Banholzer, & Albarracin, 2015)? No follow-up question concerning the details of the rape were asked, thus, no answers were obtained on the life of those who were raped. Again, almost half (44.6%) of the participants experienced imprisonment or being held in detention camps during the war. During the period of the war, many of the participants (54.7%) were deprived of food and water for so long they thought they would die. Finally, majority of participants (58.1%) admitted they were so cold during the war that they strongly believed they were going to die.

The denial of basic physiological needs (Maslow, 1970) constituted part of the Liberian *Truth and Reconciliation Committee* report (TRRC; Verdier et al., 2008) as violations of basic human rights (Long, 2008). The direct physical harm to participants notwithstanding, those who may not have experienced direct physical harm or threat moreover encountered visual experiences of the war that had the tendency of producing various posttraumatic stress disorder

symptoms (e.g. hyperarousal, depression, intrusion, avoidance, alterations in arousal and reactivity, APA, 2013).

#### Threat and harm to loved ones

Even though majority of participants (57.7%) were themselves not tortured during the war, they saw their loved ones being tortured (50.7%). In addition, a lot more participants (41.2%) saw someone being raped or sexually molested or a loved one being raped (33.1%) during the war. It is not clear whether the psychological effect of being raped and witnessing rape on a loved one can be equally ranked, however, both experiences can affect the mental health of individuals (Blair et al., 2015; Eisenman, Gelberg, Liu, & Shapiro, 2003). Almost half of participants experienced a loved one being taken prisoner (49.8%), serving in the military or an equally dangerous occupation (41.9%), and being seriously injured (46.4%). The experiences mentioned also constitute violations of human rights, and a concern for mental health counselors.

#### Visual experiences of the war

Even though some of the participants may not have experienced physical harm, majority saw someone being killed (62.6%), someone being tortured (79.7%), the body of someone who had just been killed (87.6%), see a severely injured person before he/she received medical treatment (75.5%), and see enemy soldiers forcibly enter their home (80.2%).

#### Traumatic bereavement

Participants grappled with grief on many layers during the war (Hagl, Powell, Rosner, & Butollo, 2015; Hinton, Peou, Joshi, Nickerson, & Simon, 2013). Almost half (48.9%) saw a loved one being abducted, and a loved one having serious illness like heart attack (49.8%) with

no access to medical facility. Participants indicated that even when they could have access to medical help, they had to travel through enemy territory, and fear for their lives made it impossible to take advantage of the few health facilities scattered in some regions. Despite a few having their fathers (14%), mothers (6.8%) and brothers or sisters (27.5%) killed during the war, majority experienced the death of close relatives (75.9%) and close friends (64.4%) in war-related combats. Some loved ones also died (53.2%) through causes not related to guns or bombs.

#### Displacement and/or separation from loved ones

Separation or displacement occurred as a result of direct ejection by enemy soldiers or flight of the family to seek refuge. Majority of the participants (75.7%) experienced damage to their homes, with a higher majority (82.4%) being expelled from their homes. Thus, it was not surprising that majority (86.0%) were forced to leave their village or town. Due to this flight or expulsion, majority (53.4%) experienced their loved ones missing with no idea where to find them or how long it would take to find them.

A few of the participants (8.8%) admitted divorcing during the war. Some participants indicated that their wives felt they were better off aligning themselves to warlords instead of with fleeing husbands. Due to the narrative with this particular question, a chi-square test as well as an odds ratio analysis were performed to investigate the relationship between gender and divorce during the war.

**Table 21. Chi Square Test of Association between Gender and Divorce during War**

	Value	df	Asymp. Sig. (2- sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.576 <sup>a</sup>	1	.448		
Continuity Correction <sup>b</sup>	.327	1	.567		
Likelihood Ratio	.597	1	.440		
Fisher's Exact Test				.575	.289
Linear-by-Linear Association	.574	1	.448		
N of Valid Cases	441				
Pearson Chi-Square	.576 <sup>a</sup>	1	.448		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.03.

b. Computed only for a 2x2 table

There was no statistically significant association between gender and divorce during war  $\chi^2(1) = 0.440$ . Thus, both males and females equally got divorced during the war. Furthermore, the tests of the strength of association was very weak (Phi = -0.036; Cramer's V = 0.036), further confirming that gender was not related to divorce during the war.

$$\text{Odds}_1 = 284/29 = 9.79 \text{ to } 1$$

$$\text{Odds}_2 = 119/9 = 13.22 \text{ to } 1$$

$$\text{Thus, odds ratio} = 9.79/13.22 = .776$$

However, an odds ratio analysis indicated that the odds of a male getting divorced during the war was .776 the odds of a female getting divorced during the war. Stated another way, the odds of a male getting divorced in the war was 1.288 times less than the odds of a female getting divorced during the war. Thus, more women than men were likely to get divorced during the war, lending some credence to the narrative that occurred during the data collection process.

The in-depth analysis of the War Trauma Screening Index indicated that participants endured loss to many of human basic physiological needs (e.g. food, shelter, safety; Maslow, 1970). Furthermore, direct war-related experiences presented in the form of direct physical injury and threat to life to self, direct physical injury and threat to life of loved ones, traumatic bereavement, and displacement from home and separation from loved ones. The results from this study corroborate Friedman and colleagues' assertion that trauma exposure in war-related environments is 92% (compared to 50-60% in non-war environments), and elicit 37.4% posttraumatic stress disorder in survivors (compared to 7.8% PTSD in non-war related populations). Mental health counselors need to understand these experiences to help inform their therapeutic styles and interventions.

The WTSI in its raw form is able to assess the visual effects of the war on participants. However, in its raw form, it was difficult to include it in any meaningful comprehensive analysis. Thus, a principal component analysis was undertaken to identify which items grouped under which factors.

#### Principal Components Analysis of the War Trauma Screening Index

Principal factors extraction with *varimax* rotation was performed through SAS *proc factor* prompt on 35 items for a sample of 444 adult Liberian former refugees and/or internally displaced persons. Due to missing data in some of the items, 385 records were usable.

Eight factors were extracted with a cutoff of 0.40 for inclusion of variable in interpretation of a factor. Some of the items loaded on more than two factors (items 15, 18, 19, 31, 32, 34, and 35) and were thus deleted. Inspection of the instrument indicated they addressed

similar issues and therefore one of the items could be used to represent the concept. Thus, of the 35 items in the WTSI, 28 were usable and loaded on eight factors. Factor one (Items 17, 23, 24, 25, and 26) was named “threat to loved ones”. Factor two (items 1, 2, and 3) was named “threat to self and grief”. Factor three (items 11, 12, 13, 14, and 16) was named “visual trauma”. Factor four (items 27, 28, 29, and 30) was named “loss of property and displacement”. Factor five (items 4, 5, and 6) was named “personal attack and harm”. Factor six (items 9 and 10) was named “physiological threat”. Factor seven (items 7 and 8) was named “threat to safety and trust”. Factor eight (items 20 and 21) was named “threat to family”. Thus, each of the factors had at least two items loading onto it (O’Rourke & Hatcher, 2013).

Researchers recommend performing an exploratory factor analysis to recover underlying measurement model that can be evaluated with confirmatory factor analysis (Gerbing & Hamilton, 1996; Hurley et al., 1997). Furthermore, exploratory factor analysis, which is less theoretically demanding, is considered appropriate in the early stages of scale development to show how well items load on non-hypothesized factors (Hurley et al., 1997). Thus, after identifying the items that loaded on a particular factor, a confirmatory factor analysis was performed to assess its ability to be included in the final model.

### Construct Validation of Instruments

Validation of the instruments was undertaken to examine the accuracy of the assessment to ensure that the instruments measured what they purport to measure (Gall et al., 2007; O’Rourke & Hatcher, 2013). It was prudent to undertake the validation of the instruments to ensure the items were measuring what they supposed to measure. More importantly, validation

studies confirmed that constructs under investigation, though within a non-western population, still measured the same things with instruments developed and normed after western samples.

Prior to performing the analyses, inspection of data was conducted to ensure that assumptions undergirding confirmatory factor analysis had been followed (Hair, Black, Babin, Anderson, & Tatham, 2005; O'Rourke & Hatcher, 2013; Tabachnick & Fidell, 2013). The following assumptions guided this study:

- (a) Data should be normally distributed,
- (b) Linear and additive relationships,
- (c) Absence of multicollinearity (i.e.  $r_s < .80$  between variables),
- (d) Include all nontrivial variables within the model,
- (e) An over-identified model, and
- (f) At least three indicator variables per latent factor (even though latent factor may be assessed with just two indicators under some conditions; O'Rourke & Hatcher, 2012).

Therefore, using the 'proc calis' prompt with a Maximum Likelihood procedure in SAS (SAS, 1985), correlation matrices obtained from the reliability procedure in SPSS V23 were run in SAS for each of the instruments that had reported dimensions (factors, i.e. PCL-5, RCI-10, and PTGI). To assess fit indices of the tested instruments, the following criteria were observed (Fan & Sivo, 2005; Fan & Sivo, 2007; Fan & Sivo, 2009; O'Rourke & Hatcher, 2014; Sivo, Fan, Witta, & Willse, 2006):

- (1) A Bentler's Comparative Fit Index (CFI) of  $\geq 0.95$ ,
- (2) Standardize Root Mean Square Residual (SRMR) of  $\leq 0.08$ ,



- (3) Root Mean Square Error of Approximation (RMSEA) of  $\leq 0.06$ , with its upper bound 90% confidence limit of less than 0.09.

### Validation of WTSI

The raw data from responses to the WTSI became the *datalines* in the SAS procedure, with the *proc calis* prompt. The *Maximum Likelihood* procedure properly converged in 18 iterations. Inspection of the fit indices showed partial acceptable fit of the Liberian sample (CFI = 0.9398); and the other indices indicated acceptable model fit (i.e., SRMR = 0.0473; RMSEA = 0.0353). Of note, the full range of 90% confidence limits for this RMSEA value fell outside the acceptable parameters ( $1.6994 \geq \text{RMSEA CL}_{90} \geq 1.4240$ ). Modification indices were next examined to ascertain if suggested revisions were theoretically tenable. Examination of Lagrange Multipliers (LM) suggested that the model could be significantly improved by co-varying error 29 and error 30 – two errors belonging to one factor. The resulting model, the final model, produced acceptable fit of all indices (SRMR = 0.0449; RMSEA = 0.0341, CFI = 0.9501) and indicated a reduction in both chi-square and chi-square degree of freedom (see Table 22).

**Table 22. A Progression of the Fit Indices and Modification for WTSI's CFA**

Fit Index	Final Modified	
	Model 1	Model
$\chi^2$	485.3377	408.4592
$\chi^2$ degree of freedom	313	207
SRMR	0.0473	0.0449
RMSEA Estimate	0.0353	0.0341
90% Lower bound confidence limit	1.4240	0.0272
90% Upper bound confidence limit	1.6994	0.0407
Bentler's Comparative Fit Index	0.9398	0.9501

### Validation of PCL-5

Correlation matrix of the PCL-5 was used as the *datalines* in the SAS procedure, with the *proc calis* prompt. The *Maximum Likelihood* procedure properly converged in seven iterations. Inspection of the fit indices showed an acceptable fit of the Liberian sample (CFI = 0.9388); and the other indices indicated acceptable model fit (i.e., SRMR = 0.0438; RMSEA = 0.0522). Of note, the full range of 90% confidence limits for this RMSEA value fell within the acceptable parameters ( $0.0474 \geq \text{RMSEA CL}_{90} \geq 0.0474$ ), a further confirmation that the PCL-5, a culturally-sensitive instrument, measured what it purports to measure. Modification indices were next examined to ascertain if suggested revisions were theoretically tenable. Examination of Lagrange Multipliers (LM) suggested that the model could be significantly improved by co-varying error 12 and error 13 – two errors belonging to one factor. The resulting model, called “modified model” was then re-estimated. The fit indices were a slight improvement on the earlier indices (SRMR = 0.0423; RMSEA = 0.0493, CFI = 0.9456). Again, the LM table was inspected. Co-varying errors 19 and 20 (also belonging to one factor) was deemed theoretically tenable. The resulting model, the final modified model, produced acceptable fit of all indices (SRMR = 0.0412; RMSEA = 0.0474, CFI = 0.9502) and indicated a reduction in both chi-square and chi-square degree of freedom (see Table 22).

**Table 23. A Progression of the Fit Indices and Modification for PCL-5's CFA**

Fit Index	Model 1	Modified Model	Final
			Modified Model
$\chi^2$	342.1558	321.3733	306.9332
$\chi^2$ degree of freedom	164	163	162
SRMR	0.0438	0.0423	0.0412
RMSEA Estimate	0.0522	0.0493	0.0474
90% Lower bound confidence limit	0.0474	0.0414	0.0392
90% Upper bound confidence limit	0.0474	0.0573	0.0554
Bentler's Comparative Fit Index	0.9388	0.9456	0.9502

#### Validation of RCI-10

Correlation matrix of RCI-10 was used as the *datalines* in the SAS procedure, ( $n = 444$ ), with the *proc calis* prompt. The *Maximum Likelihood* procedure properly converged in eight iterations. The fit summary produced an acceptable fit of the Liberian sample ( $CFI = 0.9475$ ); and the other indices indicated acceptable model fit (i.e.,  $SRMR = 0.0430$ ;  $RMSEA = 0.0666$ ). Of note, the full range of 90% confidence limits for this RMSEA value fell within the acceptable parameters ( $0.0818 \geq RMSEA CL_{90} \geq 0.0518$ ). To obtain a better fit, modification indices were next examined to ascertain if suggested revisions were theoretically tenable. Examination of Lagrange Multipliers (LM) suggested that the model could be significantly improved by co-varying error 8 and error 10. Though these errors belonged to different factors, the suggestion was theoretically tenable because both factors belonged to one instrument measuring religious commitment. The resulting model, called “modified model” was then re-estimated. The fit indices were a much better fit than the earlier model ( $SRMR = 0.0404$ ,  $RMSEA = 0.0570$ ,  $CFI = 0.9627$ ).

**Table 24. A Progression of the Fit Indices and Modification for the CFA of RCI-10**

Fit Index	Model 1	Modified Model
$\chi^2$	100.8199	80.4625
$\chi^2$ degree of freedom	34	33
SRMR	0.0430	0.0404
RMSEA Estimate	0.0666	0.0570
90% Lower bound confidence limit	0.0518	0.0413
90% Upper bound confidence limit	0.0818	0.0729
Bentler's Comparative Fit Index	0.9475	0.9627

#### Validation of LOT-R

Correlation matrix of the total scores as prescribed by the instrument developers (a sum of items 1, 4, 10, reverse coded items 3, 7, and 9) was used as the *cards* in the SAS procedure ( $n = 444$ ) using the *proc calis* modification prompt in the SAS procedure. The *Maximum Likelihood* procedure properly converged in 13 iterations. The fit summary produced a poor fit of the Liberian sample ( $CFI = 0.8016$ ). The other indices indicated unacceptable model fit (i.e.,  $SRMR = 0.0561$ ;  $RMSEA = 0.0825$ ). Of note, the full range of 90% confidence limits for this RMSEA value fell beyond the acceptable parameters ( $0.1115 \geq RMSEA CL_{90} \geq 0.0555$ ). To obtain a better fit, modification indices were next examined to ascertain if suggested revisions were theoretically tenable. Examination of Lagrange Multipliers (LM) suggested that the model could be significantly improved by co-varying the first two errors. The resulting model, called “modified model” was then re-estimated. The fit indices were a much better fit than the earlier model ( $SRMR = 0.0339$ ,  $RMSEA = 0.0453$ ,  $CFI = 0.9535$ ).

**Table 25. A Progression of the Fit Indices and Modification for the CFA of LOT-R**

<b>Fit Index</b>	<b>Model 1</b>	<b>Modified Model</b>
$\chi^2$	36.1414	13.3673
$\chi^2$ degree of freedom	9	7
SRMR	0.0561	0.0339
RMSEA Estimate	0.0825	0.0453
90% Lower bound confidence limit	0.0555	0.0000
90% Upper bound confidence limit	0.1115	0.0819
Bentler's Comparative Fit Index	0.8016	0.9535

#### Validation of PTGI

Correlation matrix of PTGI was used as the *datalines* in the SAS procedure, ( $n = 444$ ), with the *proc calis* prompt. The *Maximum Likelihood* procedure properly converged in seven iterations. The fit summary produced a less than acceptable fit of the Liberian sample (CFI = 0.9063); and the other indices indicated moderate model fit (i.e., SRMR = 0.0461; RMSEA = 0.0734). Of note, the full range of 90% confidence limits for this RMSEA value however fell within the acceptable parameters ( $0.0800 \geq \text{RMSEA CL}_{90} \geq 0.0669$ ). To obtain a better fit, modification indices were next examined to ascertain if suggested revisions were theoretically tenable. Examination of Lagrange Multipliers (LM) suggested that the model could be significantly improved by co-varying the third and fourth errors. Though these errors belonged to different factors, the suggestion was theoretically and practically tenable because the third error was related to the item of 'developing new interest', while the fourth error spoke to 'a greater feeling of self-reliance'. Theoretically, a person could develop new interest due to greater feeling of self-reliance or the self-reliance could lead to developing new interests

(Barrington & Shakespeare-Finch, 2013; Tedeschi & Calhoun, 2004). The resulting model, called “modified model” was then re-estimated. The fit indices were a much better fit and acceptable model than the earlier one (SRMR = 0.0450, RMSEA = 0.0665, CFI = 0.9627).

**Table 26. A Progression of the Fit Indices and Modification for the CFA of PTGI**

Fit Index	Final	
	Model 1	Modified Model
$\chi^2$	589.3923	491.2497
$\chi^2$ degree of freedom	174	179
SRMR	0.0461	0.0450
RMSEA Estimate	0.0734	0.0665
90% Lower bound confidence limit	0.0669	0.0595
90% Upper bound confidence limit	0.0800	0.0735
Bentler’s Comparative Fit Index	0.9063	0.9627

Armed with the knowledge that the western-based instruments are both valid and reliable for the non-western sample under investigation, the hypotheses and exploratory research questions were analyzed.

#### Research Hypothesis One

*Adult Liberian former refugees who still encounter intrusions, avoidance, and other re-experiencing symptoms of the trauma, and who cognitively process current events as if the traumatic events of the war still hold threats for them will have high scores on the post-traumatic stress disorder checklist. Specifically, there will be a relationship between impact of event scores (as measured by the War Trauma Screening Index [WTSI]; Layne, Stuvland, Satzman, Djapo, &*

Pynoos, 1999) and posttraumatic stress disorder scores (as measured by the *Posttraumatic Stress Disorder Checklist-5* [PCL-5]; Weathers, Litz, Keane, Palmieri, Marx, & Shnurr, 2013).

To address research hypothesis one, a Pearson correlation coefficient was computed to determine if there is a relationship between impact of event and posttraumatic stress disorder. The test was conducted using an alpha of .05. The null hypothesis was that the relationship would be zero. The assumption of independence was met through random selection.

The Pearson correlation ( $r$ ) between impact of war-related events and total score of posttraumatic stress disorder was 0.309, which is positive and interpreted as a small effect size (Cohen, 1988). The results are statistically significantly different from 0 ( $r = 0.309, n = 390, p \leq 0.001$ ). Thus, the null hypothesis that the correlation is 0 was rejected at the 0.05 level of significance. There is therefore a strong positive correlation between impact of event and posttraumatic stress disorder, even after a decade of cessation of war.

Even though all subscales in posttraumatic stress disorder were positively related, (Cluster B,  $r = .211$ ; Cluster C,  $r = .162$ ; Cluster D,  $r = .275$ ; Cluster E,  $r = .308$ ;  $p \leq .001$ ), correlation was strongest for the relationship between impact of event and Cluster E (alterations in arousal and reactivity). Cluster E symptoms include irritable behavior, reckless or self-destructive behavior, hypervigilance, problems with concentration, and sleep disturbance (APA, 2013; Friedman & Resick, 2016). If participants are still struggling with these aspects of post-war trauma, then intervention is warranted especially to prevent future destructive behavior as participants endeavor to build a country that has been ravaged by war.

### Descriptive Statistics of PCL-5 in Liberia

To further understand participants' reaction to each of the items on the scale measuring their level of posttraumatic stress disorder, descriptive statistics was performed to understand the level of PTSD symptoms in this sample. Each of the questions was ranked on a 5-point Likert-type scale (not at all = 1; a little bit = 2; moderately = 3; quite a bit = 4, and extremely = 5).

The question on 'repeated, disturbing, and unwanted memories of the experience' elicited several responses from 439 (1.1% missing) of the 444 respondents ( $M = 2.93$ ,  $SD = 1.435$ ). The majority (30.4%) indicated that they experienced this only a little bit (30.4%), then extremely (22.1%), not at all (17.6%), quite a bit (14.6%), and moderately (14.2%). See Table 27 for a detailed description.

The question of "repeated disturbing dreams of the war" ( $n = 440$ ;  $M = 2.73$ ,  $SD = 1.504$ ) indicated that the majority of the participants did not experience it at all (27.4%) or only a little bit (25.7%). The prompt of "suddenly feeling or acting as if the war experience were actually happening again (as if you were actually back there reliving it)" ( $n = 437$ ;  $M = 2.65$ ,  $SD = 1.500$ ) indicated participants were quite spread out, with majority of them not experiencing it at all (30.6%) and others just experiencing it to only a minimal degree (23.9%).

When asked if they felt upset when something reminded them of the war experience ( $n = 436$ ;  $M = 3.39$ ,  $SD = 1.453$ ), the majority indicated they were extremely bothered by this (33.1%), with some experiencing it just a little bit (22.7%) and quite a bit (19.1%). Participants answered the question of "having strong physical reactions when something reminded you of the war experience (for example, heart pounding, trouble breathing, sweating)?" ( $n = 438$ ;  $M = 3.08$ ,



$SD = 1.567$ ) by indicating in the majority that they were bothered extremely by it (28.2%) and an equally high number indicating they were not at all bothered by it (23.4%).

When participants were asked if they avoided memories, thoughts or feelings related to the war experience ( $n = 440$ ;  $M = 3.00$ ,  $SD = 1.458$ ), the majority indicated they did so a little bit (25.5%), with an almost equal number indicating they were bothered extremely by it (23.4%). The responses were almost a reflection of whether they avoided external reminders of the war experience ( $n = 435$ ;  $M = 3.00$ ,  $SD = 1.489$ ). Majority of the participants were split between avoiding external reminders a little bit (24.1%) and taking extreme measures to avoid external reminders (23.4%).

The question of “trouble remembering important parts of the war experience” ( $n = 432$ ;  $M = 2.75$ ,  $SD = 1.513$ ) indicated that participants did not have trouble (28.2%) remembering important parts of the war. The question, “having strong negative beliefs about yourself, other people or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous;  $n = 438$ ;  $M = 2.40$ ,  $SD = 1.536$ ) was probably ambiguous for participants. They could have had negative beliefs about others but not themselves, or vice versa. However, because of the nature of the question, there is no way of identifying if the negative beliefs participants indicated concerned themselves or others. The majority (42.6%) indicated they were not at all bothered by negative beliefs about themselves or other people or the world.

Another ambiguous questions was “blaming yourself or someone else for the war experience or what happened after it” ( $n = 437$ ;  $M = 2.86$ ,  $SD = 1.645$ ). Did the answer indicate participants blamed themselves or they blamed someone? Responses therefore are likely to be

masked by the ambiguity of the question. Thus, it is not surprising that responses of the many were split between “not at all” (31.5%) and “extremely” (27.7%).

The question of “having strong negative feelings such as fear, horror, anger, guilt, or shame” ( $n = 433$ ;  $M = 2.64$ ,  $SD = 1.528$ ) indicated that the majority (31.8%) did not experience this at all, or if they did, it was just a little bit (23.0%). To assess the effect of the war experiences on their interpersonal relationships, the question of “loss of interest in activities that you used to enjoy” ( $n = 435$ ;  $M = 2.66$ ,  $SD = 1.519$ ) indicated that the majority (42.3%) did not at all experience loss of interest in activities previously enjoyed.

Furthermore, the majority (42.3%) indicated they did not at all “feel distant or cut off from other people” ( $n = 435$ ;  $M = 2.38$ ,  $SD = 1.491$ ). The majority (42.3%) also did not at all have “trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?” ( $n = 439$ ;  $M = 2.31$ ,  $SD = 1.433$ ). Over half the participants (51.1%) did not at all experience “irritable behavior, angry outbursts, or acting aggressively?” ( $n = 431$ ;  $M = 2.05$ ,  $SD = 1.433$ ).

More than half of the participants (54.5%) did not at all try “taking too many risks or doing things that could cause you harm?” ( $n = 438$ ;  $M = 2.03$ ,  $SD = 1.387$ ). However, to an extreme extent, the majority (27.5%) experienced “being super-alert or watchful or on guard” ( $n = 438$ ;  $M = 3.06$ ,  $SD = 1.555$ ). The majority (32.0%) did not at all experience “feeling jumpy or easily startled” ( $n = 437$ ;  $M = 2.57$ ,  $SD = 1.477$ ); and the majority (36.0%) did not at all “have difficulty concentrating” ( $n = 437$ ;  $M = 2.58$ ,  $SD = 1.525$ ). Many of the participants also did not at all (43.5%) have “trouble falling or staying asleep” ( $n = 397$ ;  $M = 2.36$ ,  $SD = 1.500$ ).

Thus, even though individually participants' scores indicated no concern for persisting prevalence of PTSD, there were some instances of the presence of prolonged PTSD even after a decade post-conflict. These responses did not take into account the time span since the cessation of the war, which could have produced forgetfulness about the days or weeks following the war experiences. Moreover, to identify if the presence of the national Ebola epidemic had something to do with the presence of the PTSD in some participants, a one-way analysis of variance was conducted to investigate the relationship between reaction to the Ebola virus and PTSD.

**Table 27. Descriptive Statistics of Post-Traumatic Stress Disorder**

Question	Responses					
	Not at all	A little bit	Moderately	Quite a bit	Extremely	Missing Values
1. Repeated, disturbing, and unwanted memories of the experience?	78 17.6%	135 30.4%	63 14.2%	65 14.6%	98 22.1%	5 1.1%
2. Repeated disturbing dreams of the war experience?	123 27.7%	114 25.7%	53 11.9%	60 13.5%	90 20.3%	4 0.9%
3. Suddenly feeling or acting as if the war experience were actually happening again (as if you were actually back there reliving it)?	136 30.5%	106 23.9%	50 11.3%	65 14.6%	80 18.0%	7 1.6%
4. Feeling very upset when something reminded you of the war experience?	53 11.9%	101 22.7%	50 11.3%	85 19.1%	147 33.1%	8 1.8%
5. Having strong physical reactions when something reminded you of the war experience (for example, heart pounding, trouble breathing, sweating)?	104 23.4%	84 18.9%	49 11.0%	76 17.1%	125 28.2%	6 1.4%
6. Avoid memories, thoughts, or feelings related to the war experience?	83 18.7%	113 25.5%	68 15.3%	72 16.2%	104 23.4%	4 0.9%
7. Avoiding external reminders of the war experience (for example, people, places, conversations, activities, objects, or situations)?	90 20.3%	107 24.1%	55 12.4%	79 17.8%	104 23.4%	9 2.0%
8. Trouble remembering important parts of the war experience?	125 28.2%	98 22.1%	57 12.8%	64 14.4%	88 19.8%	12 2.7%

Question	Responses					
	Not at all	A little bit	Moderately	Quite a bit	Extremely	Missing Values
9. Having strong negative beliefs about yourself, other people or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	189 42.6%	84 18.9%	41 9.2%	49 11.0%	75 16.9%	6 1.4%
10. Blaming yourself or someone else for the war experience or what happened after it?	140 31.5%	83 18.7%	37 8.3%	54 12.2%	123 27.7%	7 1.6%
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	141 31.8%	102 23.0%	49 11.0%	55 12.4%	86 19.4%	11 2.5%
12. Loss of interest in activities that you used to enjoy?	143 32.2%	87 19.6%	64 14.4%	57 12.8%	84 18.9%	9 2.0%
13. Feeling distant or cut off from other people?	188 42.3%	77 17.3%	47 10.6%	63 14.2%	60 13.5%	9 2.0%
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	188 42.3%	88 19.8%	56 12.6%	53 11.9%	54 12.2%	5 1.1%
15. Irritable behavior, angry outbursts, or acting aggressively?	227 51.1%	91 20.5%	26 5.9%	38 8.6%	49 11.0%	13 2.9%
16. Taking too many risks or doing things that could cause you harm?	242 54.5%	72 16.2%	39 8.8%	41 9.2%	44 9.9%	6 1.4%
17. Being “super-alert” or watchful or on guard?	104 23.4%	81 18.2%	58 13.1%	73 16.4%	122 27.5%	6 1.4%

Question	Responses					
	Not at all	A little bit	Moderately	Quite a bit	Extremely	Missing Values
18. Feeling jumpy or easily startled?	142 32.0%	111 25.0%	48 10.8%	64 14.4%	72 16.2%	7 1.6%
19. Having difficulty concentrating?	160 36.0%	84 18.9%	47 10.6%	72 16.2%	74 16.7%	7 1.6%
20. Trouble falling or staying asleep?	193 43.55	79 17.8%	44 9.9%	59 13.3%	63 14.2%	6 1.4%

### Testing the mean difference in PTSD with reaction to Ebola

A one-way ANOVA was conducted to determine if the mean posttraumatic stress disorder score (as measured by PCL-5, Weathers et al., 2013) differed on the reaction to the Ebola epidemic in comparison to the war-related events. The assumption of normality was tested via examination of the residuals. Results indicated the assumption of normality had been violated ( $SW = 0.976$ ,  $df = 393$ ,  $p \leq .001$ ). Skewness (0.545) and kurtosis (0.289) statistics, in addition to the Q-Q plot and histogram confirmed violation of the normality assumption.

However, according to the Levene's test, the homogeneity of variance assumption was satisfied [ $F(3, 390) = 0.364$ ,  $p = .779$ ]. Since the study was non-experimental and therefore difficult to randomly assign individuals to groups, a random display of points around 0 provided evidence that the assumption of independence was met.

The one-way ANOVA was statistically significant  $F(3, 390) = 5.867$ ,  $p = .001$ . Even though the effect size was small ( $\eta^2 = .043$ ), suggesting that 4.3% of the variance of posttraumatic stress disorder is due to reaction of the Ebola epidemic, the observed power was quite strong (.953). The means and standard deviations of posttraumatic stress disorder scores for each group of reaction to Ebola were as follows: “never” felt like I was in a war situation all over again during the outbreak of the Ebola epidemic ( $M = 47.435$ ,  $SD = 17.878$ ), “rarely” felt like I was in a war situation all over again during the outbreak of the Ebola epidemic ( $M = 48.036$ ,  $SD = 17.778$ ), “often” felt like I was in a war situation all over again during the outbreak of the Ebola epidemic ( $M = 48.148$ ,  $SD = 17.937$ ), and “frequently” felt like I was in a war situation all over again during the outbreak of the Ebola epidemic ( $M = 56.546$ ,  $SD = 19.753$ ). The means and profile plot suggested that there was an increase from those who never equated

the epidemic to the war to those who did so rarely. Between those who rarely did and those who often did, there was a slight decline, only to rise exponentially for those who frequently (one or more times a day) compared the effect of the Ebola to the war experiences.

Due to the significant differences, the “multiple comparisons” table was consulted. Inspection of the table revealed that at the .05 significant level, there was a difference in PTSD scores between those who “rarely” felt they were in a war again and those who “frequently” compared the epidemic to the war. There was also a difference in those who “often” felt they were in a war again and those who “frequently” compared the Ebola virus to the war.

To ensure completeness, I also conducted an equivalent non-parametric test to add credibility to the parametric test conducted above, especially because of the violation of the assumption of normality. A Kruskal-Wallis test revealed a statistically significant mean rank difference ( $\chi^2 = 14.784$ ,  $df = 3$ ,  $p = .002$ ). The group with the largest mean rank was those who frequently felt they were in a war situation all over again during the Ebola epidemic ( $M_{Rank} = 213.11$ ), followed by those who rarely made that comparison (168.98), those who often made the comparison ( $M_{Rank} = 166.54$ ), and those who never made the comparison ( $M_{Rank} = 160.59$ ), providing further support to the ANOVA test. The Welch procedure ( $F_{asympt} = 6.165$ ,  $df1 = 3$ ,  $df2 = 74.936$ ,  $p = .001$ ) and the Brown-Forsythe ( $F_{asympt} = 6.576$ ,  $df1 = 3$ ,  $df2 = 137.428$ ,  $p \leq 0.001$ ) corroborated the results. Thus, it is safe to conclude that the presence of posttraumatic stress disorder after a decade post-conflict could be attributed to the presence of the Ebola epidemic, and to the cognitive processing of the event as if the war-related events still held threat for participants.



### Research Hypothesis Two

*Adult Liberian former refugees and IDPs who use positive emotions in processing their war-related experiences will have high posttraumatic growth scores (as measured by the PTGI, Tedeschi & Calhoun, 1996) and low posttraumatic stress disorder scores (as measured by the PCL-5, Weathers et al., 2013). Specifically, there will be an inverse relationship between posttraumatic stress and posttraumatic growth.*

To address research hypothesis two, a Pearson correlation coefficient was computed to determine if there is a relationship between posttraumatic growth and posttraumatic stress disorder. The test was conducted using an alpha of 0.05. The null hypothesis was that the relationship would be zero. The assumption of independence was met through random selection.

There was a statistically significant relationship between each of the factors of posttraumatic growth and each of the factors of posttraumatic stress disorder ( $p \leq 0.001$ ). Thus, the null hypothesis that the correlation is 0 was rejected at the 0.05 level of significance. Unsurprisingly, there was a very high correlation between factors within each instrument ( $r \geq 0.615$ ). Moreover, the Pearson correlation ( $r$ ) between “relating to others”, the first factor in the PTGI scale and each of the factors in the posttraumatic stress disorder was positive but had a small effect size (intrusion = 0.127; avoidance = 0.129; negative alterations in cognitions and mood = 0.243; alterations in arousal and reactivity = 0.222). Thus, there was a stronger relationship between relating to others and negative alterations in cognition and mood. Adult Liberian former refugees and IDPs who experienced negative alterations in cognitions (e.g. blaming themselves and/or others because of the war, having a lowered self-image or perception

about others because of the war) seemed to have increased or decreased growth in relating to others.

The Pearson correlation ( $r$ ) between “new possibilities”, the second factor in the PTGI scale and each of the factors in the posttraumatic stress disorder was also correlated at a statistically significant level (intrusion = 0.195; avoidance = 0.191; negative alterations in cognitions and mood = 0.275; alterations in arousal and reactivity = 0.233). In this second correlation as in the first, negatively alterations in cognition and mood had the strongest correlation with the posttraumatic growth factor.

Like the two earlier factors in the posttraumatic growth inventory, the Pearson correlation ( $r$ ) between “personal strength”, the third factor in the PTGI scale and each of the factors in the posttraumatic stress disorder was also correlated at a statistically significant level (intrusion = 0.212; avoidance = 0.151; negative alterations in cognitions and mood = 0.272; alterations in arousal and reactivity = 0.241). In this third correlation as in the first two, negatively alterations in cognition and mood had the strongest correlation with the posttraumatic growth factor.

The Pearson correlation ( $r$ ) between “spiritual change”, the fourth factor in the PTGI scale and each of the factors in the posttraumatic stress disorder was also correlated at a statistically significant level (intrusion = 0.252; avoidance = 0.098; negative alterations in cognitions and mood = 0.248; alterations in arousal and reactivity = 0.214). Contrary to the earlier correlations which indicated negative alterations in cognition and mood as the strongest correlation, for the “spiritual change” factor, the highest correlation was the “intrusion” factor. What accounts for this difference in correlation?

Finally, the Pearson correlation ( $r$ ) between the last factor of the PTGI scale, “appreciation of life”, and each of the factors in the posttraumatic stress disorder was also correlated at a statistically significant level (intrusion = 0.263; avoidance = 0.215; negative alterations in cognitions and mood = 0.336; alterations in arousal and reactivity = 0.304). In this final correlation, as in the first three, negatively alterations in cognition and mood had the strongest correlation with the appreciation for life factor.

The strong correlation with the negative cognition and mood is consistent with the findings of the posttraumatic growth inventory (Tedeschi & Calhoun, 2000; Calhoun & Tedeschi, 2004; 2006) that rumination and cognitive processing play an indispensable role in the processing of traumatic events and its consequent growth or lack thereof.

### Research Hypothesis Three

*Adult Liberian former refugees and IDPs who use positive emotions in processing their war-related experiences will have high religious commitment growth scores (as measured by the RCI-10, Worthington et al., 2003) and low posttraumatic stress disorder scores (as measured by the PCL-5, Weathers et al., 2013). Specifically, there will be an inverse relationship between posttraumatic stress and religious commitment.*

To address research hypothesis three, a Pearson correlation coefficient was computed to determine if there is a relationship between religious commitment and posttraumatic stress disorder. The test was conducted using an alpha of 0.05. The null hypothesis was that the relationship would be zero. The assumption of independence was met through random selection.

Research hypothesis three was partially supported. All factors except two (the relationship between ‘negative alterations in cognitions and mood’ and interpersonal religious commitment) were statistically significant at the .05 level. While, the null hypothesis that the correlation is 0 was rejected for some factors, ( $p \leq .001$ ), it was supported for others ( $p \geq 0.05$ ). There was a statistically significant relationship between intrusion and intrapersonal religious commitment ( $r = 0.178$ ), and intrusion and interpersonal religious commitment ( $r = 0.165$ ). Also, there was a statistically significant relationship between avoidance and intrapersonal religious commitment ( $r = 0.205$ ), and avoidance and interpersonal religious commitment ( $r = 0.144$ ). Even though there was a statistically significant relationship between ‘negative alterations in cognitions and mood’ and intrapersonal religious commitment ( $r = 0.106$ ), there was no statistically significant relationship between ‘negative alterations in cognitions and mood’ and interpersonal religious commitment. Likewise, even though there was a statistically significant relationship between ‘alterations in arousal and reactivity’ and intrapersonal religious commitment ( $r = 0.109$ ), there was no statistically significant relationship with ‘interpersonal religious commitment’. Once again, the strongest correlations were associated with the cognitive processing of traumatic events with factors relating to relationships both within participants themselves or with others (Calhoun & Tedeschi, 2004).

#### Research Hypothesis Four

*Adult Liberian former refugees and IDPs who use positive emotions in processing their war-related experiences will have high optimism scores (as measured by the LOT-R, Scheier et*

*al., 1994) and low posttraumatic stress disorder scores (as measured by the PCL-5, Weathers et al., 2013).*

To address research hypothesis four, a Pearson correlation coefficient was computed to determine if there is a relationship between optimism and posttraumatic stress disorder. The test was conducted using an alpha of 0.05. The null hypothesis was that the relationship would be zero. The assumption of independence was met through random selection.

Research hypothesis four was partially supported. All factors in the posttraumatic stress disorder scale, except intrusion (Cluster B:  $r = 0.107$ ,  $p < 0.05$ ) were not statistically significant at the 0.05 level ( $p \geq 0.05$ ). Even though the other clusters (Cluster C, avoidance; Cluster D, negative alterations in cognitions and mood; Cluster E, alterations in arousal and reactivity) were not statistically significant, they were all positively related to optimism except ‘alterations in arousal and reactivity’ which had an inverse relationship with optimism ( $r = -0.011$ ). Thus, there was little relationship between the adult Liberian former refugee and IDP’s posttraumatic stress disorder scores and optimism levels. To further explore if these relationships existed based on other demographic variables, or if some constructed held predictive powers, the exploratory research questions were analyzed.

#### Exploratory Research Question One

*Do adult Liberian former refugees or IDPs’ traumatic experiences (as measured by the subscales of the PCL-5, Weathers et al., 2013), optimism (as measured by the total scores of LOT-R, Scheier et al., 1994), and religious commitment (as measured by RCI-10, Worthington et*

*al., 2003) predict their level of posttraumatic growth (as measured by the total scores of PTGI, Tedeschi & Calhoun, 1996)?*

The question was answered using SPSS V23's multiple regression procedure. Prior to performing the test, inspection of the data through normality plots and histograms were undertaken (Cohen, 1990; Field, 2013). Due to the negatively skewed nature of the total scores of the PTGI, the data was reverse score transformed (Field, 2013) to make it positively skewed. The positively skewed data was then log transformed, square root transformed, and reciprocal transformed and scores of the three types of transformations compared to assess normality. The square root transformation ( $\sqrt{X_i}$ ) option was deemed the best, and thus included as the dependent variable in the multiple regression procedure.

With a final sample ( $n = 348$ ) due to deletion of missing items, each of the independent variables (i.e. *LOT-R*:  $M = 16.64$ ,  $SD = 3.99$ ; *Intrusions*:  $M = 14.99$ ,  $SD = 7.730$ ; *Avoidance*:  $M = 6.02$ ,  $SD = 2.53$ ; *Negative Alterations in Cognitions and Mood*:  $M = 17.98$ ,  $SD = 7.24$ ; *Alterations in Arousal and Reactivity*:  $M = 14.82$ ,  $SD = 7.16$ ; *Intrapersonal Religious Commitment*:  $M = 23.61$ ,  $SD = 4.53$ ; and *Interpersonal Religious Commitment*:  $M = 15.39$ ,  $SD = 3.64$ ) and the dependent variable (PTG total scores square root transformed after reverse transformation) were entered into the multiple regression procedure. Overall, the linear composite of the independent variables (posttraumatic stress, religious commitment, and optimism) entered into the regression procedure predicted 25% ( $R^2 = 0.246$ ) of the variation in the dependent criterion [ $F(7, 987.309) = 15.838$ ,  $p \leq 0.001$ ], constituting a large effect size (Cohen, 1988).

Three of the confidence intervals around their corresponding  $b$  weights included zero as a probable value, (Intrusions:  $p = 0.940$ ; Avoidance:  $p = 0.544$ ; Alterations in arousal and reactivity:  $p = 0.082$ ) so a value of zero was probable among possible values. The confidence intervals around the corresponding  $b$  weights of the rest of the independent variables did not include zero as a probable value ( $p < 0.05$ ). More conventionally, the  $b$  weights for four of the independent variables may be described as statistically significant (LOT-R,  $p = 0.012$ ; Negative Alterations in Arousal and Reactivity,  $p = 0.009$ ; Intrapersonal Religious Commitment,  $p \leq 0.001$ ; Interpersonal Religious Commitment,  $p = 0.041$ ). This suggests that the results for four of the seven independent variables are precise enough to be retained in the specified model (assuming, as is usually the case, that zero is the value of interest).

Closer inspection of the  $b$  weights suggested that with every unit increase in optimism, a 5.9% decrease was observable in posttraumatic growth. Moreover, with every unit increase in negative alterations in arousal and reactivity, there was a 5.1% decrease in posttraumatic growth. Also, with every unit increase in posttraumatic growth, there was an 11.4% decrease in intrapersonal religious commitment and a 6.6% decrease in interpersonal religious commitment.

While the values of the  $b$  weights are useful in terms of understanding the unit change in posttraumatic growth (PTG) for every unit change in posttraumatic stress disorder clusters, optimism, and religious commitment, they do not reveal the relative effects of each of the independent variables on the dependent variable. Thus, the beta ( $\beta$ ) weights were consulted. The  $\beta$  weights revealed that a standardized unit change in PTG with respect to optimism ( $\beta = -0.122$ ) was higher than a standardized unit change in PTG with respect to interpersonal religious commitment ( $\beta = -0.124$ ), which was higher than a standardized unit change in PTG with respect

to negative alterations in cognitions and mood ( $\beta = -0.191$ ), and higher than a standardized unit change in PTG with respect to intrapersonal religious commitment ( $\beta = -0.266$ ).

Inspection of the variance inflation factor for each of the predictors suggested that multicollinearity was not problematic ( $1.057 \geq VIF \leq 2.024$ ). Furthermore, inspection of the plot of the standardized residuals against predicted values revealed no (1) nonlinear trends or (2) heteroscedasticity (inconstant variance). Moreover, the distribution of the standardized errors sufficiently approximated normality, indicating that assumptions for the multiple regression procedure had been sufficiently met.

### Exploratory Research Question Two

*Is there a statistically significant difference in posttraumatic growth scores (as measured by PTGI, Tedeschi & Calhoun, 1996) between those who repatriated over 10 years ago and those who repatriated less than 5 years ago, and between those who became refugees and those who were internally displaced?*

The question was answered using the two-way ANOVA to determine whether there was an interaction effect between years of repatriation and place of displacement (independent variables) on posttraumatic growth scores (dependent variable). Some of the assumptions guiding this test included (a) continuous dependent variable; (b) two nominal or ordinal scaled independent variables, with two or more groups in each independent variable; (c) independent observations; and (d) homogeneity of variances

A two-way ANOVA was conducted to determine the interaction effect of place of refuge and time since repatriation on posttraumatic growth. The Levene's test of equality of error



variances indicated assumption of equality of variances had been met [ $F(24, 328) = 1.543, p = 0.052$ ]. There was however no statistically significant interaction effect,  $F(12, 328) = 1.739, p = 0.058; \eta^2 = 0.060$ , observed power = 0.970.

From the ‘tests of between-subjects effects’ table, place of refuge alone was statistical significant. Thus, a one way ANOVA was run with place of refuge as the independent variable to ascertain if there would be significant differences among groups. The Levene’s test indicated the assumption of homogeneity of variances had been met,  $F(4, 365) = 1.309, p = 0.266$ . There was a statistically significant interaction between groups,  $F(8, 365) = 2.135, p = 0.032$ . However, because some of the groups had less fewer than two cases (East and South Africa, Europe, and United States), post-hoc tests were not performed. Thus, a Kruskal Wallis test was performed to make allowances for the unequal groups. There was no statistically significant group differences ( $\chi^2 = 8.146, df = 6, p = 0.228$ ). The results indicate that there were no differences in posttraumatic growth scores whether a person sought refuge in French West Africa, English West Africa, or was internally displaced. The results are inconsistent with similar studies which averred that posttraumatic scores were higher for those who became refugees than those who were internally displaced because of the organized donation that is associated with refugee camps (Powell et al., 2003). The question did not ask participants if they were in refugee camps or they roamed to find safety and food wherever they could find themselves. Thus, a definite answer cannot provide the basis for comparison with previous studies with similar samples (Powell et al., 2003).

### Exploratory Research Question Three

*Is there a mean difference in adult Liberian former refugee and IDPs posttraumatic growth scores based on academic qualification, age, and gender?*

The assumption of equality of variances was violated,  $F(48, 346) = 1.680, p = .005$ . There was no statistically significant interaction effect between age, gender, and educational qualification [ $F(11, 346) = 1.398, p = 0.172$ ]. There was however a statistically significant interaction effect between age and gender [ $F(4, 346) = 2.957, p = 0.020$ ] and age and educational qualification [ $F(17, 346) = 1.861, p = 0.020$ ].

A Mann-Whitney U test, to address the problem of violation of equality assumption, indicated a statistically significant difference in posttraumatic growth based on gender ( $z = -2.734, p = 0.006$ ). Male ( $M = 283$ ) mean rank was 207.88 over females' ( $M = 112$ ) 173.04 mean rank.

To assess the difference in academic qualification, a Kruskal Wallis was performed. There was a statistically significant mean rank ( $\chi^2 = 18.525, df = 6, p = 0.005$ ) in academic qualification. Those with elementary education ( $n = 1$ ) had the highest mean rank score (273.50), followed by post graduate ( $n = 26; M = 251.12$ ), then professional degree ( $n = 28, M = 250.18$ ), bachelor's degree ( $n = 75, M = 211.72$ ), associate degree ( $n = 51, M = 190.03$ ), high school ( $n = 193, M = 184.02$ ), and trade school ( $n = 22, M = 160.34$ ).

Moreover, there was no statistically significant difference in posttraumatic growth scores according to age ( $\chi^2 = 0.472, df = 4, p = 0.976$ ). The results here are inconsistent with earlier research that indicated that those in the younger age group (e.g. 20-30 years, Powell et al., 2003) had more posttraumatic growth scores than those who were older (e.g. 50 years and above). It is

therefore satisfying to know that for the Liberian sample, posttraumatic growth scores for all age groups were not different.

#### Exploratory Research Question Four

*Is there a mean difference in adult Liberian former refugee and IDPs optimism scores based on gender and academic qualification?*

The assumption of equality of variances was met,  $F(12, 421) = 1.223, p = 0.265$ . There was no statistically significant interaction effect between age and educational qualification [ $F(5, 421) = 0.330, p = 0.895$ ]. There was also no statistically significant mean difference in optimism scores based on gender alone [ $F(1, 421) = 1.442, p = 0.230$ ] and academic qualification alone [ $F(6, 421) = 0.468, p = 0.832$ ]. Thus, optimism scores were independent of age or academic qualification. Adult Liberian former refugees and IDPs were not different in optimism based on age and academic laurels.

#### ***Exploratory Research Question Five***

*Is there a mean difference in adult Liberian former refugee and IDPs religious commitment scores based on gender and academic qualification?*

The assumption of equality of variances was met,  $F(12, 418) = 1.340, p = 0.193$ . There was a statistically significant interaction effect between age and educational qualification [ $F(5, 418) = 2.560, p = 0.027, \eta^2 = 0.030$ , observed power = 0.793] of participants in terms of their scores on the religious commitment scale (RCI-10, Worthington et al., 2003). Unfortunately, because there are fewer than three groups in the gender category, post-hoc tests were not performed. Moreover, because educational qualification had a group with fewer than two cases,

post-hoc tests were not performed for that group as well. Thus, to identify where the differences were in terms of gender and academic qualification, a Man Whitney U test was performed to examine the differences in gender, and a Kruskal Wallis test performed to investigate the differences in academic qualification.

The Mann Whitney U test indicated a statistically significant difference in gender in terms of religious commitment ( $z = -3.890, p \leq 0.001$ ). Females ( $n = 126, M = 252.27$ ) had higher mean rank scores than their male counterparts ( $n = 305, M = 201.02$ ). The results are consistent with several studies that assessed religiousness or religious commitment in traumatized population (Kroo & Nagy, 2011; Pargament, Smith, Koenigh, & Perez, 1998).

Results of the Kruskal Wallis test assessing the rank differences in religious commitment according to academic qualification revealed no statistically significant difference ( $\chi^2 = 5.273, df = 6, p = 0.509$ ) in religious commitment scores. Thus, whether adult Liberian former refugees and IDPs had high or low educational qualification, their level of religious commitment was not different across board.

#### Exploratory Research Question Six

*Is there a mean difference in adult Liberian former refugee and IDPs' level of optimism based on employment and income?*

The assumption of equality of variances was met,  $F(10, 275) = 1.629, p = 0.098$ . There was no statistically significant interaction effect in optimism scores between employment and income of adult Liberian former refugees and IDPs. The results were confirmed by the non-

parametric test. Thus, participants' level of optimism was not different based on a person who was employed and one who was not, and based on the size of the paycheck.

Surprisingly, when a Mann-Whitney was performed to assess optimism scores based on whether participants were employed or not, the results indicated a statistically significant mean rank difference in optimism based on employment ( $z = -4.309$ ,  $p \leq 0.001$ , Mann-Whitney  $U = 16351.500$ ). Optimism scores were high for participants who indicated they were employed ( $n = 277$ ,  $M_{Rank} = 236.97$ ) than those who indicated they were not employed ( $n = 157$ ,  $M_{Rank} = 183.15$ ). Thus, in the Liberian sample, the perception of employment produced higher optimism scores than the actual paycheck a person took home.

#### Exploratory Research Question Seven

*Is there a mean difference in adult Liberian former refugee and IDPs' level of religious commitment based on perception of religiousness, religious affiliation, and religious involvement?*

The assumption of equality of variances was met,  $F(10, 416) = 1.088$ ,  $p = 0.370$ . There was no statistically significant difference in religious commitment scores based on perception of religiousness ( $F[2, 416] = 0.442$ ,  $p = 0.643$ ), and religious affiliation ( $F[2, 416] = 0.294$ ,  $p = 0.745$ ). However, there was a statistically significant difference in involvement in religious activities ( $F[4, 416] = 5.686$ ,  $p \leq 0.001$ ;  $\eta^2 = 0.052$ ). The results were confirmed via the non-parametric equivalent (Kruskal Wallis) that there was no statistically significant mean rank difference in religious commitment scores based on perception of religiousness and religious affiliation.

Consistent with the ANOVA results, the level of religious involvement indicated a statistically significant mean rank difference. The group with the highest mean rank was those who were frequently (one or more times a week) involved in the practices of their religious faith ( $n = 342$ ;  $M_{Rank} = 239.67$ ), followed by those who were never involved in the practices of their religious faith ( $n = 2$ ,  $M_{Rank} = 179.75$ ). The next highest was those who indicated they got involved in the practices of their religious faith often (once every month;  $n = 43$ ,  $M_{Rank} = 130.12$ ), and finally, those who rarely got involved (one or two times a year;  $n = 32$ ,  $M_{Rank} = 94.09$ ). Thus, it was possible for an adult Liberian former refugee and IDP who got involved in the practices of his or her religious faith to have high religious commitment scores, more than their perception of religiousness or even their religious affiliation (i.e. Christian, Muslim, and African Traditional Religion).

Finally, because correlations from the hypotheses did not imply causality (Fraenkel & Wallen, 2003; Gall et al., 2007), I undertook a test that had the power to assess the underlying causal constructs of the theoretical model addressed in the construct validation. Thus, to assess the causal relationships undergirding the research hypotheses, a structural equation model was performed as a measurement model to test the relationship among the latent factors and their indicator variables (Byrne, 2009; Hair et al., 2009; O'Rourke & Hatcher, 2013; Schumacker & Lomax, 2015; Tabachnick & Fidell, 2013).

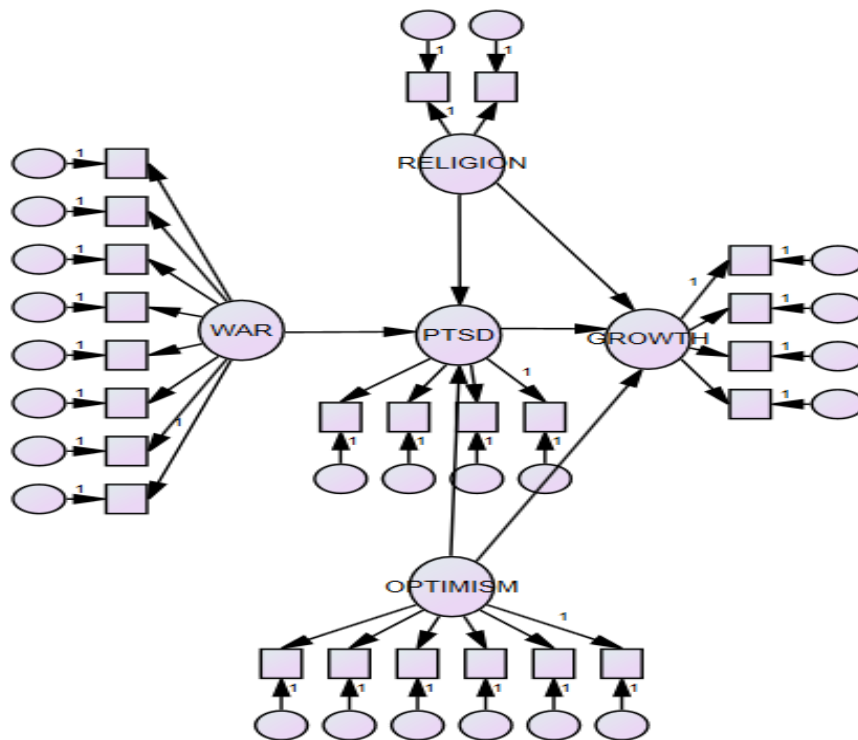
### SEM of PTG, PTSD, Religious Commitment, and Optimism

The question for analyzing the structural equation model was “does the model produce an estimated population covariance matrix consistent with the observed (sample) covariance

matrix?” It was hypothesized that war-related trauma will predict posttraumatic stress disorder which could lead to posttraumatic growth. Furthermore, when religious commitment and optimism affect posttraumatic stress, the effect will be an increase in posttraumatic growth scores.

Parameters were thus estimated to create an estimated population covariance matrix. The covariance matrix consisted of all the factors of PTG, all factors of PCL, both factors of RCI, all eight newly discovered WTSI factors, and the six items that make the total LOT-R scores.

In the figure 2 below, circles represent latent variables, and rectangles represent measured variables. Absence of a line connecting variables implies lack of a hypothesized direct effect. The hypothesized model examined the predictors of posttraumatic growth. Posttraumatic growth was a latent endogenous variable with five indicators (relating to others, new possibilities, personal strength, spiritual change, and appreciation for life). Posttraumatic stress disorder was both a latent endogenous and exogenous variable with four indicators (intrusion, avoidance, negative alterations in cognitions and mood, and, alterations in arousal and reactivity). Optimism was a latent exogenous variables with six indicators (items 1, 4, and 10, and reverse coded items 3, 7 and 9). Religious commitment was a latent exogenous variable with two indicators (intrapersonal religious commitment and interpersonal religious commitment). Finally, impact of event was a latent exogenous variable with eight indicators (threat to loved ones, threat to self and grief, visual trauma, loss of property and displacement, personal attack and harm, physiological threat, threat to safety and trust, threat to family).



**Figure 2: Hypothesized Structural Equation Model**

It was hypothesized that impact of event would directly predict posttraumatic stress disorder. It was also hypothesized that posttraumatic stress disorder, optimism, and religious commitment would each predict posttraumatic growth. Finally, it was hypothesized that posttraumatic stress, through optimism and religious commitment, would indirectly predict posttraumatic growth.

### Assumptions

The assumptions were evaluated through IBM SPSS and EQS. The dataset contains responses from 444 adult Liberian former refugees and IDPs. Due to missing data, 325 moments constituted the final data set. There were no univariate or multivariate outliers.



### Model Specification

A structural equation model was conducted to analyze the hypothesized model that impact of event would directly predict posttraumatic stress disorder, which would predict posttraumatic growth. A second hypothesis was that religious commitment and optimism would both work on posttraumatic stress to produce increased posttraumatic growth scores than just posttraumatic stress disorder alone.

### Model Identification

The specified model had two endogenous latent variables. The first endogenous variable, F1, represented posttraumatic growth. The second endogenous variable, F2, represented posttraumatic stress disorder. The specified model also had three exogenous latent variables. These variables are F3 (optimism), F4 (religious commitment), and F5 (war-related events).

### Model Estimation, Testing, and Modification

The Maximum Likelihood procedure properly converged in 32 iterations ( $\chi^2 = 440.7125$ ,  $df = 264$ ). Overall, the proposed model did not fit the data well (CFI = 0.9254; RMSEA = 0.0455; SRMR = 0.0603). A review of the  $t$ -values suggests that only one of the parameters was not statistically significant ( $t = \geq 1.96$ ;  $p < 0.05$ ). Inspection of the linear equations table indicated that LOT10 was problematic and not statistically significant (Estimate = 0.12983,  $s.e.$  = 0.07156,  $t$ -value = 1.8144,  $p = 0.0696$ ). The squared multiple correlations for each equation suggested large effect sizes ( $R^2 \geq 0.25$ ; Cohen, 1988), except seven equations which had medium effect sizes (LOTR3 = 0.1140; LOT1 = 0.1388; LOT4 = 0.0848; WTSIF6 = 0.1869; and WTSIF8 = 0.1994; Cohen, 1988) and trivial effect sizes (LOT10 = 0.0169 and WTSIF7 = 0.0196; Cohen, 1988).

Thus, only marginal support was found for the hypothesized model  $\chi^2 (264, N = 325) = 440.7125, p < 0.001, CFI = 0.9254, SRMR = 0.0603, RMSEA = 0.0455$ . Of note, the full range of 90% confidence limits for this RMSEA value fell within the acceptable parameters ( $0.0528 \leq RMSEA CL_{90} \leq 0.0379$ ). Modification indices were next examined to ascertain if suggested revisions were theoretically tenable.

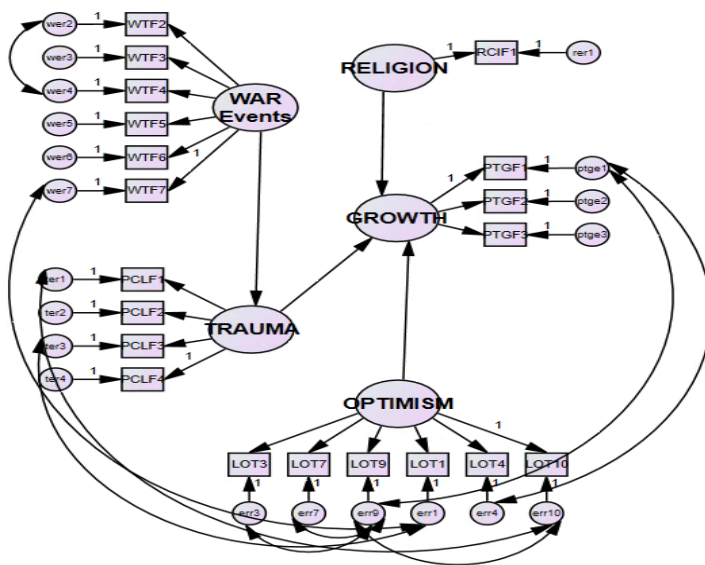
Examination of Lagrange Multipliers (LM) suggested that the model could be significantly improved by adding a path from the fourth factor of PTG, which speaks to spiritual change, to the religious commitment factor. However, that suggestion decreased the Bentler's Comparative Fit Index to 0.8903, a figure below the criteria of acceptable fit (Sivo et al., 2006). Thus, upon consultation of the literature as well as modification indices, the revised model consisted of deleting PTG factors 4 and 5, as well as PCL factor 2, and the first factor of WTSI. Furthermore, religiousness and optimism neither mediated nor moderated the relationship between PTSD and PTG. However, optimism and religiousness each had the ability to predict growth. Co-varying errors within the various factors indicated that invariably, all the constructs had some level of relationship among themselves.

The revised model properly converged in nine iterations ( $\chi^2 = 265.7485, df = 154; CFI = 0.9465, SRMR = 0.0492, RMSEA = 0.0405$ ).

**Table 29. Structural Equation Modeling Progression of Liberian Sample**

Fit Index	Model 1	Final Model
$\chi^2$	440.7125	265.7485
$\chi^2$ degree of freedom	264	154
SRMR	0.0603	0.0492
RMSEA Estimate	0.0455	0.0405
90% Lower bound confidence limit	0.0379	0.0321
90% Upper bound confidence limit	0.0528	0.0486
Bentler's Comparative Fit Index	0.9254	0.9465

On the basis of these overall findings, revised model appears to best reflect the patterns of association within the derived dataset. Revisions to the initial hypothesized model are theoretically tenable and led to improved model estimation. We therefore propose the modified final model appearing as Figure 3 as the final model.



**Figure 3: Final SEM Model of Liberian Sample**

### Limitations of the Study

There are inherent limitations to every study despite pre-planned rigor. Thus, the next section will identify limitations that are connected with the study, as well as the strengths that make the study worth its contribution in the literature and discourse on trauma and posttraumatic growth.

### Research Design

A cross-sectional study of this nature come with various limitations. Even though data attrition was not an issue as is found in longitudinal studies (Gall et al., 2007), the sample under investigation was not representative of adult Liberian former refugees and IDPs. Because of the nature and duration of the war, some Liberians have become residents in the countries they sought refuge (Omata, 2013). Others sought political asylum and have been resettled in more advanced countries, and others may have died. All these categories of people may have contributed their experiences in ways that the current sample could not adequately capture, causing a limitation to the study. Finally, because of time (over a decade since the end of the war), changes may have occurred in participants causing some to forget significant incidents or to put the war-related events into perspective.

### Violations of assumptions

Several parametric tests were used in analyzing this study (e.g. one-way ANOVA, factorial ANOVA, multiple regression). The tests shared some common assumptions like homogeneity of variances, dependent variable measured on a continuous scale, independence of observations, and normality. However, because many of these assumptions were violated (e.g. Levene's tests for homogeneity of variances), the non-parametric equivalents had to be used.

Non-parametric tests, however, do not rely on these parametric assumptions (Gall et al., 2007) and are considered less powerful.

### Incentive

Liberia is one of the poorest countries in West Africa (UN, 2016; World Bank, 2016), thus an incentive of \$5, though culturally acceptable, could have constituted a limitation in the number of participants who were referred through the snowball sampling method. It is possible that relatives, knowing how much \$5 could help feed members of the family, recommended that members in the family offer to take the research package to increase the amount of money gained. Thus, the incentive could have coerced participants to answer questions in a socially acceptable manner, further skewing the results.

Even though the researcher repeatedly reassured participants that the study was voluntary, knowledge of the Dean's approval may have provided an aspect of coercion for the study.

### Sample

The non-random sampling methods provided another limitation to the study; the inability to make valid inferences from the method to the population (Gall et al., 2007). To avert this limitation, it is recommended that replication studies be conducted with samples from similar populations and the results compared to lend credence to this current study. In addition, though a large sample size is desirable, it can mask significance when there is no significance, thus increasing the chances of a type I error (Field, 2013).

Another limitation with the sample is the criteria set for participants. The criteria was that participants should have a self-report eighth grade English reading and comprehension,

should have been at an age to remember the war and the flight to safety. Thus, the criteria denied an equally large number of possible participants who would have been in a position to provide responses to contribute to the overall results of the study. A recommendation would be to conduct a qualitative study and target participants who are information rich but may not have the educational qualification.

### Instrumentation

In a perfect world, it would have been advisable for the tests to have standard conditions of administration and scoring to increase objectivity (Gall et al., 2007). However, due to the nature of the study site and participants, data collection method, which included group work in classrooms, mosques, churches, and homes, may have introduced bias. Furthermore, in the process of the group data collection, participants would pause frequently to discuss incidents that occurred. This process may have also introduced bias in either reminding other participants or enabling participants to answer in a certain way. Finally, because students knew each other, they could have shared some of the questions with those who had not yet taken the research package, further incorporating bias into subsequent data collection with other students.

Even though the War Trauma Screening Index (WTSI, Layne et al., 1999) was able to assess participants' physical war-related experiences, because it was not psychometrically sound, it introduced bias in the study. Thus, a recommendation for future research will be either to undertake psychometric studies on it before including it in a study or to find an equivalent psychometrically sound instrument to use in place of the WTSI.

Furthermore, despite the wide usage of the RCI-10, LOT-R, PCL-5, and PTGI, translating the instruments into a common language with the appropriate cultural nuances would have provided different results.

Moreover, even though using the scales in their original form may have been a limitation, its strength is that currently, no study exists that has used these scales in their original form with non-western populations. Thus, it speaks to the multicultural nature of the instruments.

## **CHAPTER FIVE: DISCUSSION AND CONCLUSION**

In the fields of counseling, psychology, public health, and social work, literature abounds on refugees and the mental health challenges they encounter (Betancourt et al., 2011; Jayasuriya, 2014; Kimhi et al., 2013). There is also a growing body of knowledge that focuses on resilience (Bannink, 2014), thriving and posttraumatic growth (Powell et al., 2003; Powell et al., 1998) in refugee populations. In the various studies on posttraumatic growth, religious commitment has been identified as either helping or harming the posttraumatic growth process (Calhoun et al., 2000; Joseph, 2011). Other studies have also identified optimism as helping to buffer the effect of trauma on the mental health of people (Sandel, 2007). Moreover, a scarce number of studies have focused on repatriated former refugees and their posttraumatic growth (Powell et al., 2003). Even though many of these refugee-related studies focused on refugees in western environments, specifically resettled refugees (Kroo & Nagy, 2011), a few addressed refugees in Africa (Prana, 2013). Knowing the need for the African voice in the mental health dialogue, specifically as it concerns refugees, I designed this study to investigate the effect of religious commitment and optimism on the posttraumatic growth of adult Liberian former refugees and internally displaced persons (IDPs) traumatized by war-related experiences.

To assess the influence of optimism and religious commitment on former refugees and IDPs, I hypothesized that former refugees and IDPs who still cognitively process the war-related events as if they still hold threat for them will score high on the posttraumatic stress disorder scale. However, those who were able to use positivity, specifically religious commitment and



optimism, would score low on posttraumatic stress disorder scale and high on posttraumatic growth scores.

### Discussion and Conclusion of Research Hypothesis One

The hypothesis that former refugees and IDPs who still cognitively process the war-related events as if they still hold threat for them will score high on the posttraumatic stress disorder scale was addressed using the Pearson's correlation. The null hypothesis was that there will be a relationship between impact of event (as measured by WTSI, Layne et al., 1999) scores and posttraumatic stress disorder scores (as measured by PCL-5, Weathers et al., 2013). It was hypothesized that the correlation between impact of war-related events and posttraumatic stress will be zero. This hypothesis was rejected at the 0.05 level of significance. There was a strong positive correlation between impact of event and posttraumatic stress disorder, even after a decade of cessation of war. The strong prevalence of PTSD over a decade post conflict indicates that mental health counselors should always assess for trauma at intake to ensure persisting PTSD symptoms are addressed (Friedman, Resick, & Keane, 2016).

In connecting the case of Liberia to current events in the US, counselors helping survivors and loved ones in the Orlando Pulse Night Club massacre may not assume that because journalists have stopped reporting the incidents, all is over. Results from the Liberian sample indicates that PTSD symptoms can last over a decade post-traumatic incident. Thus, even when people stop talking about the massacre and counselors want to avoid rehashing the incident and experiences, they have to pay attention to any PTSD symptoms within any of the clusters that

can come up in the life of survivors and loved ones in the future to impede their social and cognitive functioning.

Furthermore, in situations where both mental health counselors and clients have suffered the same traumatic experiences, it is important that counselors are able to assess resilience training and interventions for themselves before they can show clients how to apply these skills for their mental health well-being (Barrington & Shakespeare-Finch, 2013). It is also worthy of note that counselors could gain vicarious trauma during their work with traumatized clients; thus to ensure their own mental health well-being, they should be able to assess counseling for their own growth.

The posttraumatic stress disorder clusters of “alterations in arousal and reactivity” and “negative alterations in cognition and mood” produced the highest correlations with impact of war-related events. The symptoms in this cluster include irritable behavior, reckless or self-destructive behavior, hypervigilance, problems with concentration, false cognitions about self and others, and sleep disturbance (APA, 2013; Friedman & Resick, 2016). For a country intent on rebuilding its infrastructure and human resources, if the youth is still struggling with recklessness and self-destructive behavior, they will not be psychologically endowed to help with nation building. If intervention is not applied, it may lead to future destructive behaviors that could spill over other countries, and become a world-wide catastrophe (Carmignani & Kler, 2015).

The implications aforementioned notwithstanding, the case of the Liberian sample was unique in that the country was still battling a nation-wide Ebola epidemic during the time of the data collection. Therefore, it was necessary to determine if the PTSD symptoms within the

sample was because of the war-related experiences or the re-traumatization from the Ebola epidemic.

A one-way ANOVA was thus conducted to determine if the mean PTSD scores differed based on reaction to the Ebola epidemic. Participants were asked to indicate “never”, “rarely”, “often”, or “frequently” to the statement “during the outbreak of the Ebola epidemic, I felt like I was in a war situation all over again”. Results from the test indicated a statistically significant difference in PTSD scores based on reaction to the Ebola epidemic. The Ebola epidemic did indeed make a difference in the PTSD scores of adult Liberian former refugees and IDPs. When respondents expressed their trepidation about their battle with the national epidemic, it confirmed Diagne (2014) and Doucleff’s (2015) observation about the traumatic experiences Liberians encountered in a fight with an invisible enemy.

Posttraumatic stress disorder scores were highest for those who frequently (thinking about it more than once a day) compared the epidemic to the war situation. Inasmuch as the results confirmed the hypothesis that those who cognitively process traumatic events as if they still hold threat to them will have high PTSD scores (Ehlers & Clark, 2000), mental health counselors need to be aware that traumatic events could make PTSD symptoms persist in clients who have endured multiple and repeated traumas. Thus, for trauma counselors, it is imperative that both individual and group resilient mechanisms are put in place to ensure continued thriving and posttraumatic growth of clients battered by traumatic experiences (Friedman et al., 2016).

### Discussion and Conclusion of Research Hypothesis Two

The hypothesis that former refugees and IDPs who use positive emotions in processing their war-related experiences will have high posttraumatic growth scores and low posttraumatic stress scores was also addressed via Pearson's correlation. It was hypothesized that the relationship between posttraumatic growth and posttraumatic stress disorder will be zero. The Pearson correlation results indicated that there was a positive correlation between posttraumatic stress disorder and posttraumatic growth. Contrary to the hypothesized inverse relationship, the relationship between PTSD and PTG was positive, confirming Kroo and Nagy's (2011) study on Somali refugees resettled in Hungary, that PTSD and PTG could cohabit (Kroo & Nagy, 2011). Thus, it would be wrong to assume that a person who has PTSD symptoms cannot have PTG as well. The five factors of PTG (relating to others, new possibilities, personal strength, spiritual change, and appreciation for life) were statistically significantly correlated with the four factors in the PTSD inventory (intrusion, avoidance, negative alterations in cognitions and mood, and alterations in arousal and reactivity). Moreover, the PTSD factor "negative alterations in cognitions and mood" had the highest correlation with each of the PTG factors, except "spiritual change", which had the highest correlation with intrusion. I could aver that because spirituality and/or religiousness concerns a search for the sacred (McIntosh, Poulin, Silver, & Homan, 2011; Pargament & Maton, 2000), it becomes understandable that "intrusion" more than any of the other factors would more highly correlate with "spiritual change". The search for the sacred involves rumination, which can be both conscious and unconscious, and therefore "intrusion" is understandably the highest correlate to "spiritual change".

### Discussion and Conclusion of Research Hypothesis Three

It was hypothesized that adult Liberian former refugees and IDPs who use positive emotions in processing their war-related experiences will have high religious commitment scores and low posttraumatic stress scores. The third hypothesis was partially supported. All factors with posttraumatic stress disorder except two (the relationship between ‘negative alterations in cognitions and mood’ and interpersonal religious commitment) were significant. There was a statistically significant relationship between intrusion and intrapersonal religious commitment ( $r = 0.178$ ), and intrusion and interpersonal religious commitment ( $r = 0.165$ ). Religiousness deals with both a search for the sacred as well as the support system found within religious groups (Batson, Schoenrade, & Ventis, 1993; Pargament & Maton, 2000; Ringdal and Ringdal, 2010). It has been identified that the support within religious organizations can be both helpful and harmful towards people’s psychological growth (Hamren, Chungkham, and & Hyde, 2014). Consequently, both intrusion and avoidance which deal with cognitive process and rumination, were significantly related to both intrapersonal (within a person himself or herself) and interpersonal (among people) religious commitment.

It seems that for the religious in the Liberian sample, many of their PTSD symptoms were related to their own internal religious struggles more than with others in their religious community. Thus, even though there was a statistically significant relationship between ‘negative alterations in cognitions and mood’ and intrapersonal religious commitment, there was no statistically significant relationship between ‘negative alterations in cognitions and mood’ and interpersonal religious commitment. Likewise, even though there was a statistically significant relationship between ‘alterations in arousal and reactivity’ and intrapersonal religious

commitment, there was no statistically significant relationship with ‘interpersonal religious commitment’. Consequently, the highest correlations were recognized between PTSD symptoms and participants’ inward struggles in their search for the sacred, and no recognized relationships between the factors in PTSD and people’s religious commitment as it related to one another.

#### Discussion and Conclusion of Research Hypothesis Four

The hypothesis that adult Liberian former refugees and IDPs who use positive emotions in processing their war-related traumatic experiences will have high optimism scores and low posttraumatic stress disorder scores was also partially supported at the 0.05 significant level. The PTSD factor of intrusion was statistically significantly related to optimism ( $r = 0.107$ ,  $p < 0.05$ ) lending support to the fact that optimism is a personality trait and connected with cognitive-related disorders like anxiety and depression (Broekhof et al., 2015). Moreover, the rest of the results indicate that the adult Liberian former refugee and IDP’s optimism level was not related to any of the other three posttraumatic stress disorder factors.

#### Discussion and Conclusion of the Theoretical Model

In the theoretical model, it was hypothesized that war-related trauma will predict posttraumatic stress disorder which could lead to posttraumatic growth. Furthermore, when religious commitment and optimism affect posttraumatic stress, the effect will be an increase in posttraumatic growth scores.

Thus, the model specified was that war-related events (as measured by WTSI, Layne et al., 1999) would lead to posttraumatic stress disorder (as measured by PCL-5, Weathers et al.,

2013), which would lead to posttraumatic growth (as measured by PTGI, Tedeschi & Calhoun, 1996). In addition, it was hypothesized that religious commitment (as measured by RCI, Worthington et al., 2003) and optimism (as measured by Scheier et al., 1996) could lead to increased posttraumatic growth through posttraumatic stress disorder.

In testing the model to see if the hypothesized model fit the Liberian data, it was discovered that the Liberian data was consistent with Joseph and Linley's (2005) postulation. The authors asserted that in studying religious growth or commitment within the posttraumatic growth construct, the spiritual change factor should be deleted to identify any growth. Thus, when the spiritual change factor in the posttraumatic growth construct was deleted, the model greatly improved from the previous hypothesized model. Finally, errors associated with items within optimism and loss of property and displacement, indicated the adult Liberian who went through displacement ended up appreciating life and gaining optimism.

Errors of the second and fourth factors within the war instrument correlated. The second factor concerned "threat to self and grief" while the fourth factor concerned "loss of property and displacement." In the Liberian sample, there was a strong relationship in how participants connected loss of their property and displacement during the war to a threat to self, capable of causing them grief. There was also a strong relationship between the errors of the seventh factor in the war instrument, "threat to safety and trust" to how optimistic participants are in expecting the best in uncertain times (LOT-R, Scheier et al., 1994). In addition, the error associated with the same optimism item (Item 1: *In uncertain times, I usually expect the best*) covaried with the error associated with both "intrusion" and "negative alterations in cognition and mood" factors in the PTSD scale, and covaried with the first factor in post-traumatic growth, "relating to others."

Thus, despite the threat to their safety and the shaking of their trust, Liberian former refugees and IDPs cognitively ruminated over optimism. This relationship could also play on their negative expectations and beliefs about self and others, and help them rebuild trusting relationships with one another. Additionally, the relationship provides hope for the Liberian sample in that if they expect the best in uncertain times, then that positivity will affect the way they relate to each other as they learn to gain growth post-trauma and rebuilt the country. Expectedly, all errors associated with negatively worded items in the optimism scale (Items 3, 7, and 9) co-varied among themselves, confirming the original intention of the instrument developers and gaining corroboration within the Liberian sample. Finally, the co-varying of the errors association with the “intrusion” factor and the final optimism item (*overall, I expect more good things to happen to me than bad*) encapsulates the strong determination and hope of the Liberian former refugee and IDP.

#### Summary and Conclusion of Exploratory Research Questions

To investigate the predictive nature of trauma, religiousness, and optimism on posttraumatic growth, a multiple regression was conducted to answer the question. Results of this investigation indicated that together, the three independent variables (posttraumatic stress disorder, religious commitment, and optimism) accounted for 25% of the variation in posttraumatic growth. Specifically, optimism alone was a statistically significant predictor of posttraumatic growth, as were “negative alterations in arousal and reactivity”, intrapersonal religious commitment, and interpersonal religious commitment. This seems to suggest that the adult Liberian former refugee and IDPs’ level of posttraumatic growth was predicted by both



factors of religious commitment, optimism, and only one factor of posttraumatic stress disorder. Even though these variables were statistically significant predictors of posttraumatic growth, their predictive abilities were inversely related to posttraumatic growth. Thus, the more growth a person obtained, the lower their level of “negative alterations in arousal and reactivity”, consistent with other studies which assessed the effect of posttraumatic stress on posttraumatic growth (Tedeschi, Calhoun, & Cann, 2007). Optimism, similar to posttraumatic stress, had an inverse predictive value on posttraumatic growth. Thus, the adult Liberian former refugee and IPD who had high PTG scores had low optimism scores, and equally low religious commitment scores. Even though these findings contradict many previous studies, it validates the Australian qualitative study undertaken by Shakespeare-Finch and Copping (2007) who found from their studies that posttraumatic growth for some of their participants indicated a decrease in religiousness. The findings from the Liberian sample confirm the Australian study and add to the dialogue on the cross-cultural component of posttraumatic growth.

The second exploratory question investigated the difference in PTG scores between years since repatriation, and between those who were internally displaced and those who became refugees. Prior to analyzing this question, the demographic information had indicated that majority of the participants repatriated or found some form of stability right after the war. This is consistent with UNHCR’s objective to let displaced individuals repatriate as soon as possible (Omata 2013; 2014). Worthy of note, though, is that people are still trickling into the country as evidenced by the lower numbers corresponding to the recent repatriation years.

The non-parametric test conducted to answer this question indicated no significant differences in PTG scores among the groups of repatriated former refugees. Furthermore, there

was no statistically significant difference in PTG scores between internal displacement and refugee status. Powell and colleagues' study (2003) on Bosnian repatriated former refugees indicated that those who became refugees had higher PTG scores than those who were internally displaced. They surmised that the results could be because refugee status is recognized by UNHCR and thus organized sustenance provided for them more than the internally displaced. The case for the Liberian sample seem to contract the Bosnian findings in finding no statistically significant difference in PTG scores between those who were refugees and those who were internally displaced. However, because the question did not ask participants if they were in refugee camps or they roamed to find safety and food wherever they could find, a definite comparison cannot be made between the Liberian sample and the Bosnian sample.

The third exploratory research question examined the differences in posttraumatic growth scores based on academic qualification, age, and gender. Due to violations of the ANOVA assumptions, equivalent non-parametric tests were conducted to find answers to this question. A Man-Whitney U test identifying the differences in PTG scores based on gender indicated a statistically significant difference in PTG scores between males and females, with males scoring higher PTG scores than females. The findings are contrary to studies that found females reported higher PTG scores than males (Birkeland et al., 2014).

Similarly, the Kruskal Wallis test performed to investigate the differences in PTG scores based on academic qualification found a statistically mean rank difference in PTG scores based on academic qualification. Contrary to studies (Ai et al., 2003) that found high PTG scores correlating with higher educational qualification, the participants in the Liberian study who had elementary education as the highest educational qualification had the highest mean rank score

followed by post graduate, then professional degree, bachelor's degree, associate degree, and high school degree. Thus, despite the group in the high school category having the largest number, their mean rank was the lowest compared to those who had elementary education.

Finally, to assess the PTG scores based on age, a one-way ANOVA was conducted, results of which indicated no statistically significant difference in PTG scores based on age. The results from the Liberian sample are inconsistent with Powell and colleagues research with Bosnian former refugees. In the Bosnian sample, those who were 20-30 years had more posttraumatic growth scores than those who were 50 years and above. In the Liberian sample, there was no difference in PTG scores on account of age.

The fourth exploratory research question investigated the mean difference in optimism based on gender and academic qualification. The results indicated no statistically significant optimism scores based on either age or education or both. Thus, optimism in the Liberian sample was not dependent on gender nor academic qualification.

The fifth question assessed differences in religious commitment scores based on gender and academic qualification. There was a statistically significant interaction effect between age and educational qualification. Post-hoc tests which would have allowed an in-depth identification of the specific differences was not possible because gender had only two categories. As previously done with tests where the parametric version could not provide the detailed information needed to make informed decisions, a non-parametric version was undertaken. The Mann Whitney U test which identified mean rank differences in gender with religious commitment scores indicated that consistent with other studies (Chaaya et al., 2007; Krägeloh, et al., 2010; Kroo & Nagy, 2011), females had higher mean rank scores than their

male counterparts. Finally, an investigation into academic qualification and religious commitment indicated no statistically significant mean rank scores based on academic qualification. Thus, whether adult Liberian former refugees and IDPs had high or low educational qualification, their level of religious commitment was not different across board.

The sixth exploratory research question investigated the differences in optimism scores based on employment status and income. There was a statistically mean rank difference in optimism scores based on employment status. Optimism scores were higher for those who indicated they were employed than those who did not. Contrarily, results of both parametric and non-parametric tests to assess the differences in optimism based on the income indicated no statistically significant difference in optimism. Thus, employment status, more than the amount of money earned was a contributor to the differences in optimism of adult Liberian former refugees and IDPs.

Finally, the seventh exploratory research question examined the differences in religious commitment scores across three categories – perception of religiousness, religious affiliation, and religious involvement. Responses to the demographic questionnaire about their self-report evaluation of the level of religiousness indicated a majority saw themselves as religious and Christian. This confirms North and colleagues' study that established that Africa was the most religious continent, with majority of religious traditions coming from the west (North et al., 2005).

There was no statistically significant difference in religious commitment scores between those who perceived themselves as religious and those who did not. In addition, no significant difference in religious commitment was identified in the various religious affiliation. Thus,

whether a participant was Muslim, African Traditionalist or Christian did not affect the level of religious commitment. Finally, statistically significant mean rank differences were noticed in the different self-report levels of involvement in religious practices and activities of their faith. Those who were involved in their religious practices one or more times a week had the highest mean rank scores, followed by those who were never involved, those who got involved once a month, and finally those got involved once or twice a year. Thus, it was possible for an adult Liberian former refugee and IDP who got involved in the practices of his or her religious faith to have high religious commitment scores, more than their perception of religiousness or even their religious affiliation (i.e. Christian, Muslim, and African Traditional Religion).

#### Strengths of the Study

There are various strengths in correlational studies. The primary advantage is its ability to analyze relationships among a large number of variables in a single study (i.e. war-related trauma, posttraumatic stress disorder, optimism, religious commitment, and posttraumatic growth; Frankel & Wallen, 2003; Gall et al., 2007). Furthermore, the correlational study provides information about the degree of relationships under study. Correlational studies have the ability to explore causal relationships among variables as well as predict scores on variable from one participant to another.

The acceptable nature of both validity and reliability of the PCL-5 as an instrument measuring posttraumatic stress is commendable. Cougle and colleagues (2012) as trauma researchers were concerned about culturally sensitive assessment tools for research. Results

from both the validity and reliability studies proved the PCL-5 as a culturally sensitive instrument that had the ability to measure posttraumatic stress in a non-western environment.

### Implications for Counselors/Therapists/Clinicians

This section provides a summary of the implications gleaned from the hypotheses and exploratory research questions.

1. If the youth, needed for nation building in a developing third world country are struggling with post-traumatic stress disorder symptoms (i.e. recklessness and self-destructive behavior), then they need immediate interventions to endow them psychologically for mental health stability. Being mentally well will enhance their ability to contribute to nation building.
2. Vicarious trauma (Barrington & Shakespeare-Finch, 2013) can be found in helpers who help traumatized groups; thus, it is important that helpers' own wellness is prioritized before they are able to help clients.
3. Clinicians can focus on strength-based effects of trauma as they could lead to psychological well-being. Data from the Liberian sample indicated people who earned low and high incomes were both equally optimistic. Thus, if optimism can enhance posttraumatic growth, then therapists can approach former refugees and refugees from a strength-based perspective.
4. Addressing religiousness or spirituality within trauma survivors could enhance their posttraumatic growth levels. Worthy of note is that within the Liberian sample, academic qualification was not a determinant of high religious commitment scores. Thus,

therapists could address spirituality and/or religiousness within the Liberian population without worrying about differences in academic qualifications. Furthermore, since there was no difference in religious commitment scores based on religious affiliation, therapists can address the issue of religiousness as it informed the navigation of the traumatic experiences of former refugees or refugees of all religious faiths.

5. Moreover, despite displacement and loss of property, former refugees could still maintain a level of optimism that enhanced their appreciation for life, leading to posttraumatic growth.
6. Since there was no difference in posttraumatic growth scores based on years since repatriation, counselors can enter into the therapeutic process with current refugees and former refugees knowing that posttraumatic growth is not dependent on years of repatriation. Care should be taken, though, in assuming that posttraumatic growth can occur the same way for repatriated former refugees as for resettled former refugees. The focus of this study was not to compare posttraumatic growth scores between resettled former refugees and repatriated former refugees. However, it is important to note that each of these post-refugee states come with their own mental health challenges.

#### Implications for Future Research

The study argued for mental health services for both former refugees and current refugees in light of the mental health challenges they go through. The study under investigation indicated that posttraumatic stress disorder can persist in former refugees a decade after war-related experiences. For future research, a similar study can be undertaken

with a similar population who have not experienced any recent traumatic event (e.g. a national epidemic) that re-traumatizes them. A study like that will disconfirm or corroborate this study in identifying the persistence or eradication of posttraumatic stress symptoms after a decade.

Furthermore, other studies can be conducted on the African continent to add to the mental health discourse from that continent, thereby contributing to the world mental health discussion. Even though this study contributed by lending a voice to mental health in West Africa, the lack of random sampling method makes generalization difficult. Thus, future research could endeavor to undertake both experimental and correlational studies using as many of the random sampling methods as are feasible.

Finally, future studies could translate the instruments to allow a wider range of participants to take part in the study as this current study restricted many former refugees and internally displaced persons from having their stories heard. Reducing the limits on participants could provide richer data than this current study provided.



## **APPENDIX A: IRB APPROVAL LETTER**



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**  
**FWA00000351, IRB00001138**

To: **Hannah Acquaye**

Date: **September 28, 2015**

Dear Researcher:

On 09/28/2015, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Project Title:	The Relationship Among Posttraumatic Growth, Religious Commitment, and Optimism in Adult Liberian Former Refugees and Displaced Persons Traumatized by War-Related Events
Investigator:	Hannah Acquaye
IRB Number:	SBE-15-11618
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 09/28/2015 10:14:57 AM EDT

IRB Manager

## **APPENDIX B: PERMISSION FROM LAYNE (WTSI)**

## RE: Permission to use the "War Trauma Screening Index"

LC Layne, Christopher M. <CMLayne@mednet.ucla.edu>

[Reply all](#) |

To: Hannah Acquaye; Cc: ☐ Dayle Jones <daylejones@ucf.edu>; ☐ ...

Thu 03/09/2015 23:02

You replied on 15/09/2015 19:02.

Isakson, Legerski, Layne...  
304 KB

1 attachment (304 KB)

### | Action Items

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Hello, Hannah,

Thanks for your interest in my war exposure index and for your respectful request. I am fine with your proposed uses of the instrument, but do also strongly recommend that you read some of the supporting work I have done with and around it (conceptually and methodologically) so that I have assurances that it is used properly. These include reading:

1. Layne, Olsen et al. 2010 Child Development paper, which focuses on conceptualization, interpretation, scoring of the Index
2. Layne, Warren et al. 2007 book chapter, which focuses on conceptualization of posttraumatic adjustment/resilience
3. Layne, Beck, et al. 2009 book chapter, which focuses on conceptualization of posttraumatic adjustment, challenging people to think beyond protective factors to consider promotive and facilitative/catalytic factors
4. Layne, Steinberg, Steinberg 2014 causal reasoning article, which focuses on building a causal theory of adjustment and intervention
5. Al-Sabah, Legerski, Layne et al. 2015 article on long-term post-war adjustment in war-exposed youth
6. Our newly published paper on EBP with refugee youth (attached-please do not disseminate)

(All of the other sources can be accessed from my academia.edu or ResearchGate websites.)

## **APPENDIX C: WTSI FOR LIBERIA**

	<i>Answer the following questions as honestly as you can remember about the events that you experienced or witnessed during the Liberian war.</i>	<b>No</b> <b>0</b>	<b>Yes</b> <b>1</b>
1.	During the war, were you ever in a dangerous situation where you strongly believed you would be seriously hurt or killed?	<b>0</b>	<b>1</b>
2.	Did a bullet ever come so close to you that you could have been seriously hurt or killed?	<b>0</b>	<b>1</b>
3.	Did a grenade or bomb ever land so close to you that you could have been seriously hurt or killed?	<b>0</b>	<b>1</b>
4.	Were you ever seriously hurt during the war?	<b>0</b>	<b>1</b>
5.	Did anyone ever personally threaten to kill or seriously hurt you during the war?	<b>0</b>	<b>1</b>
6.	Were you ever tortured during the war?	<b>0</b>	<b>1</b>
7.	Were you ever raped or sexually molested during the war?	<b>0</b>	<b>1</b>
8.	Were you ever taken prisoner or held in a detention camp during the war?	<b>0</b>	<b>1</b>
9.	Were you ever deprived of food or water for so long that you strongly believed you were going to die?	<b>0</b>	<b>1</b>
10.	Were you ever so cold during the war that you strongly believed you were going to die?	<b>0</b>	<b>1</b>
11.	During the war, did you eye witness someone being killed?	<b>0</b>	<b>1</b>
12.	Did you see the body of someone who had been killed in the war? (Do not include funerals.)	<b>0</b>	<b>1</b>
13.	Did you see someone being tortured during the war?	<b>0</b>	<b>1</b>
14.	Did you see someone being raped or sexually molested during the war?	<b>0</b>	<b>1</b>
15.	Did you touch or carry someone who had been wounded or killed in the war?	<b>0</b>	<b>1</b>
16.	During the war, did you see a severely injured person before he/she received medical treatment?	<b>0</b>	<b>1</b>
17.	During the war, did you witness a loved one being abducted or taken prisoner by the enemy?	<b>0</b>	<b>1</b>
18.	Was your father killed in the war?	<b>0</b>	<b>1</b>
19.	Was your mother killed in the war?	<b>0</b>	<b>1</b>

	<i>Answer the following questions as honestly as you can remember about the events that you experienced or witnessed during the Liberian war.</i>	<b>No</b> <b>0</b>	<b>Yes</b> <b>1</b>
20.	Was your brother or sister killed in the war?	<b>0</b>	<b>1</b>
21.	Was a close relative killed in the war?	<b>0</b>	<b>1</b>
22.	Was a close friend killed in the war?	<b>0</b>	<b>1</b>
23.	During the war, was a loved one seriously injured?	<b>0</b>	<b>1</b>
24.	During the war, was a loved one raped or sexually molested?	<b>0</b>	<b>1</b>
25.	Was a loved one tortured during the war?	<b>0</b>	<b>1</b>
26.	Was a loved one ever taken prisoner or held in a detention camp during the war?	<b>0</b>	<b>1</b>
27.	Was your home seriously damaged due to the war?	<b>0</b>	<b>1</b>
28.	During the war, did enemy soldiers forcibly enter your home?	<b>0</b>	<b>1</b>
29.	During the war, were you expelled from your home?	<b>0</b>	<b>1</b>
30.	Were you forced to leave your village/town because of the war?	<b>0</b>	<b>1</b>
31.	During the war, did a member of your immediate family serve in the military or another extremely dangerous occupation?	<b>0</b>	<b>1</b>
32.	During the war, did a loved one have serious illness (cancer, heart attack) or chronic health problem?	<b>0</b>	<b>1</b>
33.	During the war, did a loved one die due to causes unrelated to the war?	<b>0</b>	<b>1</b>
34.	During the war, was a loved one missing, and you did not know whether they would ever return?	<b>0</b>	<b>1</b>
35.	During the war, did you get divorced?	<b>0</b>	<b>1</b>

## **APPENDIX D: PERMISSION FROM YODER (PCL-5)**



## PTSD Assessments

YM Yoder, Matthew S <Matthew.Yoder@va.gov>

Reply all |

To: Hannah Acquaye;

Wed 02/09/2015 11:50

To help protect your privacy, some content in this message has been blocked. To re-enable the blocked features, [click here](#).

To always show content from this sender, [click here](#).

Greetings, and thank you for your assessment instrument request.

You may access National Center for PTSD assessment measures by following the link below:  
[http://www.ptsd.va.gov/professional/assessment/documents/ptsd\\_trauma\\_assessments.asp](http://www.ptsd.va.gov/professional/assessment/documents/ptsd_trauma_assessments.asp)

These assessment tools were created by government employees and therefore are not copyrighted. In accordance with the American Psychological Association's ethical guidelines, these instruments are intended for use by qualified health professionals with advanced graduate training in psychodiagnostic assessment.

Please let us know if you have any difficulties downloading these instruments. Also, no thank you email is necessary.

Sincerely,  
National Center for PTSD Staff

Subscribe to the PTSD Monthly Update  
<http://www.ptsd.va.gov/about/subscribe.asp>

Matthew Yoder, Ph.D.  
Clinical Psychologist & Consultant  
PTSD Consultation Program  
National Center for PTSD, Executive Division  
[matthew.yoder@va.gov](mailto:matthew.yoder@va.gov)  
(804) 246-9984

PTSD-Consultation-Logo-Signature

866-948-7880 or [PTSDconsult@va.gov](mailto:PTSDconsult@va.gov)

## **APPENDIX E: PCL-5 FOR LIBERIA**

If an event listed on the Life Events Checklist **happened to you** or you **witnessed it**, please complete the items below. If more than one event happened, please choose the one that is **most troublesome to you now**. Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, then **circle** one of the numbers to the right to indicate how much you have been **bothered** by the problem **since the time of the war**.

<b>BOTHERED BY</b>	<b>Not at all</b>	<b>A little bit</b>	<b>Moderately</b>	<b>Quite a bit</b>	<b>Extremely</b>
1. Repeated, disturbing, and unwanted memories of the experience?	1	2	3	4	5
2. Repeated disturbing dreams of the war experience?	1	2	3	4	5
3. Suddenly feeling or acting as if the war experience were actually happening again (as if you were actually back there reliving it)?	1	2	3	4	5
4. Feeling very upset when something reminded you of the war experience?	1	2	3	4	5
5. Having strong physical reactions when something reminded you of the war experience (for example, heart pounding, trouble breathing, sweating)?	1	2	3	4	5
6. Avoid memories, thoughts, or feelings related to the war experience?	1	2	3	4	5
7. Avoiding external reminders of the war experience (for example, people, places, conversations, activities, objects, or situations)?	1	2	3	4	5
8. Trouble remembering important parts of the war experience?	1	2	3	4	5
9. Having strong negative beliefs about yourself, other people or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	1	2	3	4	5
10. Blaming yourself or someone else for the war experience or what happened after it?	1	2	3	4	5
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	1	2	3	4	5

<b>BOTHERED BY</b>	<b>Not at all</b>	<b>A little bit</b>	<b>Moderate</b>	<b>Quite a bit</b>	<b>Extremely</b>
12. Loss of interest in activities that you used to enjoy?	1	2	3	4	5
13. Feeling distant or cut off from other people?	1	2	3	4	5
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	1	2	3	4	5
15. Irritable behavior, angry outbursts, or acting aggressively?	1	2	3	4	5
16. Taking too many risks or doing things that could cause you harm?	1	2	3	4	5
17. Being “super-alert” or watchful or on guard?	1	2	3	4	5
18. Feeling jumpy or easily startled?	1	2	3	4	5
19. Having difficulty concentrating?	1	2	3	4	5
20. Trouble falling or staying asleep?	1	2	3	4	5

## **APPENDIX F: PERMISSION FROM WORTHINGTON (RCI-10)**

## Re: Permission to use the "Religious Commitment Inventory" (RCI-10)



Everett L. Worthington <eworth@vcu.edu>

03/09/2015

Hannah Acquaye; Dayle Jones <daylejones@ucf.edu>; Stephen Sivo <Stephen.Sivo@ucf.edu> ▾



You replied on 03/09/2015 14:40.



▾ Show all 10 attachments (1 MB) Download all Save all to OneDrive - University of Central Florida - UCF

Yes, you have my permission. Here are some helpful documents.

Ev

On Thu, Sep 3, 2015 at 9:59 AM, Hannah Acquaye <[hannah\\_acquaye@knights.ucf.edu](mailto:hannah_acquaye@knights.ucf.edu)> wrote:

Dear Dr. Worthington,

I am a doctoral candidate from the University of Central Florida, Orlando. I am an international student (from Ghana, West Africa) enrolled in the PhD Counselor Education Program. I am in my third year currently working on a proposal for my dissertation tentatively titled "The relationship between positive psychology and growth from trauma in Liberian former refugees and displaced persons." This disser under the direction of my dissertation committee chairs, Drs. K. Dayle Jones and Stephen A. Sivo.

I would be grateful if you could give me permission to reproduce to use your instrument "Religious Commitment Inventory (RCI-10)" for my sample of Liberian former refugees and displaced persons.

## **APPENDIX G: RCI-10 FOR LIBERIA**

	Not at all True of Me	Slightly True of Me	Moderately True of Me	Very True of Me	Totally True of me
	1	2	3	4	5
1. I often read books and magazines about my faith	1	2	3	4	5
2. I make financial contributions to my religious organization	1	2	3	4	5
3. I spend time trying to grow in understanding of my faith	1	2	3	4	5
4. Religion is especially important to me because it answers many questions about the meaning of life	1	2	3	4	5
5. My religious beliefs lie behind my whole approach to life	1	2	3	4	5
6. I enjoy spending time with others of my religious affiliation	1	2	3	4	5
7. Religious beliefs influence all my dealings in life	1	2	3	4	5
8. It is important to me to spend periods of time in private religious thought and reflection	1	2	3	4	5
9. I enjoy working in the activities of my religious organization	1	2	3	4	5
10. I keep well informed about my local religious group and have some influence in its decisions	1	2	3	4	5



## **APPENDIX H: PERMISSION FROM SCHEIER (LOT-R)**

---

**From:** Michael F. Scheier <[scheier@cmu.edu](mailto:scheier@cmu.edu)>

**Sent:** 03 September 2015 19:33

**To:** Hannah Acquaye

**Subject:** Re: RE: Permission to use the "Revised Life Orientation Test"

I apologize for this automated reply. Thank you for your interest in our work. You have my permission to use any of the scales that I have helped to develop for your research and/or teaching purposes. I do not charge for the use of these scales. I only ask that you reference for the scales you use appropriately in all publications. Note that I only send permission approval electronically, so I will not be sending a follow-up letter authorizing the use of a scale through regular mail.

If you wish to use a measure for a purpose other than teaching or research, you should also contact the copyright holder, the publisher of the journal in which the measure was published.

Information concerning the measure you are asking about can be found at the website below. Questions about reliability, validity, norms, and other aspects of psychometric properties can be answered there. The website also contains information about administration and scoring procedures for the scales.

I do not track attempts to translate the scales into different languages, so I have no information to offer about that. You are free to develop your own translation if you would like to do that. Again, just be sure to cite the original scale appropriately in publications.

Please do not ask for a manual. There is no manual. Read the articles on the website for the information that you need.

If questions remain, do not hesitate to contact me. Good luck in your work.

<http://www.psy.cmu.edu/people/scheier.html>

--

Michael F. Scheier, Ph.D.

Professor of Psychology

Department of Psychology

Baker Hall 335-F

[Carnegie Mellon University](#)

[Pittsburgh, PA 15213](#)

Voice: 412-268-3791

FAX: 412-268-2798

## **APPENDIX I: LOT-R FOR LIBERIA**

<b>Directions:</b>  Please answer the following questions about yourself by indicating the extent of your agreement with the scale on the right-hand side	Strongly Disagree [0]	Disagree [1]	Neither Agree Nor Disagree [2]	Agree [3]	Strongly Agree [4]
<i>Be as honest as you can throughout, and try not to let your responses to one question influence your response to other questions. There are no right or wrong answers. The numbers are just for identification.</i>					
1. In uncertain times, I usually expect the best.	0	1	2	3	4
2. It is easy for me to relax.	0	1	2	3	4
3. If something can go wrong for me, it will.	0	1	2	3	4
4. I am always optimistic about my future.	0	1	2	3	4
5. I enjoy my friends a lot.	0	1	2	3	4
6. It is important for me to keep busy.	0	1	2	3	4
7. I hardly ever expect things to go my way.	0	1	2	3	4
8. I do not get upset too easily.	0	1	2	3	4
9. I rarely count on good things happening to me.	0	1	2	3	4
10. Overall, I expect more good things to happen to me than bad.	0	1	2	3	4

## **APPENDIX J: PERMISSION TEDESCHI (PTGI)**

## Re: Permission to use Post Traumatic Growth Inventory

TR Tedeschi, Rich <[rtedesch@uncc.edu](mailto:rtedesch@uncc.edu)>

To: Hannah Acquaye;

Reply all |

Wed 09/09/2015 11:43

You replied on 09/09/2015 13:22.

Dear Hannah--Yes, you have my permission to use the PTGI for your research. Do you have a proper copy of it? If not, I can supply you with this instrument.

R. Tedeschi

On Tue, Sep 8, 2015 at 2:37 PM, Hannah Acquaye <[hannah\\_acquaye@knights.ucf.edu](mailto:hannah_acquaye@knights.ucf.edu)> wrote:

Dr. Richard Tedeschi (Professor)  
Department of Psychology  
UNC Charlotte

Dear Dr. Tedeschi,

I am a doctoral candidate from the University of Central Florida, Orlando. I am an international student (from Ghana, West Africa) enrolled in the PhD Counselor Education Program. I am in my third year and currently working on a proposal for my dissertation tentatively titled "The relationship between positive psychology and growth from trauma in Liberian former refugees and displaced persons." This dissertation is under the direction of my dissertation committee chair, Dr. K. Dayle Jones.

I would be grateful if you could give me permission to reproduce to use your instrument "Posttraumatic Growth Inventory" for my sample of Liberian former refugees and displaced persons.

I would like to print your survey under the following conditions:

1. I will use this survey only for my research study;
2. I will not sell or use it with any compensated or curriculum development activities;
3. I will include the copyright statement on all copies of the instrument.

## **APPENDIX K: PTGI FOR LIBERIA**

Please indicate which change you experienced as a result of the Liberian war	I did not experience this change as a result of my crisis [1]	I experienced this change to a <i>very small degree</i> as a result of my crisis [2]	I experienced this change to a <i>small degree</i> as a result of my crisis [3]	I experienced this change to a <i>moderate degree</i> as a result of my crisis [4]	I experienced this change to a <i>great degree</i> as a result of my crisis [5]	I experienced this change to a <i>very great degree</i> as a result of my crisis [6]
1. I changed my priorities about what is important in life.	0	1	2	3	4	5
2. I have a greater appreciation for the value of my own life	0	1	2	3	4	5
3. I developed new interests	0	1	2	3	4	5
4. I have a greater feeling of self-reliance	0	1	2	3	4	5
5. I have a better understanding of spiritual matters	0	1	2	3	4	5
6. I more clearly see that I can count on people in times of trouble	0	1	2	3	4	5
7. I established a new path for my life	0	1	2	3	4	5
8. I have a greater sense of closeness with others	0	1	2	3	4	5
9. I am more willing to express my emotions	0	1	2	3	4	5
10. I know better that I can handle difficulties	0	1	2	3	4	5
11. I am able to do better things with my life	0	1	2	3	4	5
12. I am better able to accept the way things work out	0	1	2	3	4	5
13. I can better appreciate each day	0	1	2	3	4	5



Please indicate which change you experienced as a result of the Liberian war	I did not experience this change as a result of my crisis [1]	I experienced this change to a <i>very small degree</i> as a result of my crisis [2]	I experienced this change to a <i>small degree</i> as a result of my crisis [3]	I experienced this change to a <i>moderate degree</i> as a result of my crisis [4]	I experienced this change to a <i>great degree</i> as a result of my crisis [5]	I experienced this change to a <i>very great degree</i> as a result of my crisis [6]
14. New opportunities are available which wouldn't have been otherwise	0	1	2	3	4	5
15. I have more compassion for others	0	1	2	3	4	5
16. I put more effort into my relationships	0	1	2	3	4	5
17. I am more likely to try to change things which need changing	0	1	2	3	4	5
18. I have a stronger religious faith.	0	1	2	3	4	5
19. I discovered that I'm stronger than I thought I was	0	1	2	3	4	5
20. I learned a great deal about how wonderful people are	0	1	2	3	4	5
21. I better accept needing others	0	1	2	3	4	5

## **APPENDIX L: DEMOGRAPHIC QUESTIONNAIRE**

## General Demographic Questionnaire

**Directions:** Please circle **only ONE** answer to indicate what applies to you.

1. How old are you?

A. 20 – 30 years

B. 31 – 40 years

C. 41 – 50 years

D. 51 – 60 years

E. 61 years and above

---

2. What is your gender (sex)?

A. Female

B. Male

---

3. What is your marital status?

A. Single

B. Married

C. Widowed

D. Divorced

E. Living with a partner

---

4. How many children do you have?

A. None

B. 1 -2

C. 3-4

D. 5 or more

---

5. What is your educational qualification?

A. Elementary

B. Trade School

C. High school

D. First degree (Bachelor's)

E. Professional degree

D. Post-Graduate

---

6. Did you ever leave your home because of the war?

A. Yes

B. No

---

7. If you left your home, which part of the world did you seek refuge?

A. English West Africa

B. French West Africa

C. Central Africa

D. East Africa

E. South Africa

F. Within Liberia

G. Europe

H. United States

I. More than one country

---

8. If you left your home, how long has it been since you came back?
- |                     |                      |                |
|---------------------|----------------------|----------------|
| A. Less than 1 year | B. 1 – 3 years       | C. 4 – 6 years |
| D. 7 – 9 years      | E. 10 years and more |                |
- 

9. Are you employed? A. Yes B. No
- 

10. If you are employed, what is your monthly income?
- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| A. Less than L\$5,000             | B. Between L\$5,000 and L\$10,000 |
| C. Between L\$10,001 to L\$15,000 | D. Between L\$15,001 to L\$20,000 |
| E. Between L\$20,001 to L\$25,000 | F. Between L\$25,001 to L\$30,000 |
| G. More than L\$30,001            |                                   |
- 

11. If you are employed, which sector of Liberia do you work in?
- |                    |                   |                  |
|--------------------|-------------------|------------------|
| A. Education       | B. Private Sector | C. Government    |
| D. Religious group | E. NGO            | F. Self-employed |
- 

12. Do you see yourself as a religious person? A. Yes B. No
- 

13. If you see yourself as religious, what is your religious affiliation?
- |                 |             |                                 |
|-----------------|-------------|---------------------------------|
| A. Christianity | B. Islam    | C. African Traditional Religion |
| D. Buddhism     | E. Hinduism | F. Other? (specify) _____       |
- 

14. If you are religious, how often do you get involved in the practices of your religious affiliation?
- |  |                                 |                             |
|--|---------------------------------|-----------------------------|
| A. Never                               | B. Rarely (1 or 2 times a year) | C. Often (once every month) |
| D. Frequently (1 or more times a week) |                                 |                             |
- 

15. During the outbreak of the Ebola virus, I felt like I was in a war situation all over again.
- |                                       |                          |                                 |
|---------------------------------------|--------------------------|---------------------------------|
| A. Never                              | B. Rarely (once a while) | C. Often (Once or twice a week) |
| D. Frequently (1 or more times a day) |                          |                                 |

**Thank You for Completing This Questionnaire!!!**

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