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Effectiveness of a Trauma Recovery Curriculum for Former Child Soldiers in Africa

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Abstract

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MA, Walla Walla University, 2009

BA, Northwest University, 2004

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

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Abstract

The use of child soldiers as a weapon of war is a practice that has been condemned by the United Nations but still exists as a common practice in third world countries impacted by ongoing war conflict. When these child soldiers are rescued or able to return home, often their struggles continue and worsen. Social reintegration into the community after witnessing horrific acts of human cruelty can be challenging. Guided by Herman's theory of stages of healing, the purpose of this quantitative quasi-experimental archival study was to examine the effectiveness of By His Wounds: Trauma Healing for Africa, a research-based culturally driven trauma treatment program designed for African culture, being implemented in war-torn areas. Archival data from 66 former child soldiers who completed the treatment program were analyzed using a paired sample *t* test. Statistically significant results demonstrated that post-traumatic stress disorder symptoms, as measured by the Trauma Symptom Checklist-40, decreased between pre- and postintervention on all seven scales of the measure, across all participants. The results of this study confirmed the findings of previous studies that examined the effects of a research-based trauma intervention with former child soldiers. Positive social change implications included the identification of an evidence-based trauma intervention that is effective and low-cost, highlighting a sustainable model of healing that can be used to treat traumatized populations.

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Dedication

To the BHW facilitators throughout Africa who have dedicated their lives to healing and helping others heal. And to Mama Sylvie, whose life was taken as she was carrying out the work of trauma healing. You have inspired this research, and it would not have been possible without your dedication and tireless effort to bring hope to the traumatized.

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Chapter 1: Introduction to the Study

This study was an investigation of the effectiveness of a trauma treatment program in reducing trauma symptoms for adult former child soldiers who participated in a trauma recovery group in cities in East Africa in 2021. This study was important because it added to the current knowledge on impactful mental health interventions for this marginalized and underserved population. This study also filled a gap in the literature by examining the effectiveness of a culturally contextualized trauma curriculum that blends theological and psychological principles as well as trauma theory research to reduce trauma symptoms for former child soldiers. The treatment program, By His Wounds (BHW): Trauma Healing for Africa (Tracy & Tracy, 2019), had not been studied but was being implemented in treatment settings in regions in East Africa.

Third world countries affected by war, poverty, and natural disasters often lack the infrastructure and resources to care for and treat their communities affected by tragedy and war (Betancourt et al., 2020). Mental health issues associated with war are often stigmatized, misunderstood, and not treated effectively, if at all. This lack of available and effective treatment for psychological injury becomes a generational cycle of ongoing struggle, rippling out to further damage the stability and structure of communities and countries (Betancourt et al., 2020; Robjant et al., 2019).

Research on effective treatments for former child soldiers has focused on Western models of trauma recovery and existing Western modalities of treatment. Although the current body of research has demonstrated positive impacts of evidence-based treatment on trauma symptoms, the emphasis from these studies has been on the need for continued

research on effective treatments designed for this population of former child soldiers and the cultures in which they live (Betancourt et al., 2010; Betancourt et al., 2020; Denov & Lakor, 2017, 2018; Purgato et al., 2018; Weisleder & Rublee, 2018).

Chapter 1 includes the background of the research, the problem statement, and the purpose of the study. Additionally, the research question and hypotheses, assumptions, scope, and delimitations are discussed. Finally, the nature of the study, its limitations, and its significance are addressed.

Background

According to the United Nations Children's Fund, the use of child soldiers has been widespread in over 86 countries (United Nations Security Council, 2016). When children are used as weapons of war, the implications for individuals, families, and societies are profoundly negative and far-reaching. The United Nations has deemed the forcible recruitment of children as soldiers a human rights violation and crisis (United Nations Security Council, 2016). The world's attention was drawn to this human rights issue near the end of a 2-decade long war in Northern Uganda between the government and a rebel group, the Lord's Resistance Army (LRA), between 1986 and 2007. The emergence of forcible child recruitment as a war tactic in African countries became highlighted around the world through the media in 2007 with the release of a memoir by former child soldier Ishmael Beah (2007), titled *A Long Way Gone: Memoirs of a Boy Soldier*. A public outcry and movement against this practice led to more research and global recognition of the negative outcomes of child soldiering.

The LRA rebel group became notorious for recruiting children to commit war crimes, often against their neighbors and families. The Cessation of Hostilities Agreement of 2006 expelled the LRA from Uganda where they then took up residence in neighboring countries, yet the lingering effects were deleterious and crippling for communities seeking to rebuild after conflict (Preston, 2015). Although the hostilities formally came to an end in early 2008, in other areas of Africa the effects of the war have persisted (Kane et al., 2016).

Countries in which child soldiers are enlisted in war face the issue of reintegrating these children back into their families and communities once the conflict subsides. Often, the emergence of severe mental health disorders, particularly post-traumatic stress disorder (PTSD), make it difficult for reintegration to occur (Betancourt et al., 2020). Few mental health resources are available to these populations that address the unique psychological challenges faced by war-affected youth (Newnham et al., 2015).

Problem Statement

The research problem that was addressed in the current study was the effectiveness of postconflict treatment interventions available to former child soldiers as they attempt to reintegrate into their communities. Often, former child soldiers return to the communities where they were forced to participate in atrocious acts of war against family and neighbors. Without an effective trauma intervention, there is little chance that they can return to society successfully. Trauma has lingering effects that can impact a person’s view of themselves, others, and the world (Robjant et al., 2019). Reintegrating former child soldiers into their families and communities is beneficial to society on

multiple levels. A healed person can seek out employment, engage in meaningful relationships, and contribute to their communities whereas a traumatized victim with no intervention may struggle to survive (Betancourt et al., 2020; Robjant et al., 2019).

Research on interventions with children and young adults traumatized by war and organized violence is scarce (Pfeffer & Erdal, 2015). The difficulties faced by former combatants as they return to their communities are cause for concern. They face hostility and suspicion, are behind their peers academically and vocationally, and are ostracized by their former neighbors and families (Preston, 2015). Former child soldiers return to unstable conditions in terms of livelihood and security (Ertl et al., 2011; Garbarino et al., 2020). Further complicating the issue, former combatants experiencing PTSD symptoms are significantly less likely to be open to the reconciliation process, interrupting the reintegration effort and erecting barriers in a critical process that requires both individual and communal change (Newnham et al., 2015).

Studies have shown the effectiveness of narrative exposure therapy (NET) and trauma-focused cognitive-behavioral therapy (TF-CBT) in the treatment of former child soldiers (Newnham et al., 2015; Preston, 2015; Robjant et al., 2019, Schiltz et al., 2016; Van Leeuwen et al., 2018; Weisleder & Rublee, 2018). However, existing research lacks specificity and rigor in identifying evidence-based or research-driven interventions that are effective postconflict that are community focused and derived from the unique culture and context within which they are needed and tailored to war-affected participants (Betancourt et al., 2020; Boothby & Thomson, 2013; Denov, 2020; Hinsberger et al., 2017; Klasen et al., 2013).

Purpose of the Study

The purpose of this quantitative, quasi-experimental archival study was to investigate the effectiveness of the BHW (Tracy & Tracy, 2019) treatment program in reducing trauma symptoms for adult former child soldiers who participated in a trauma recovery group in Uganda and the Democratic Republic of Congo (DRC) in 2021. The curriculum includes topics that are based on Herman's (2015) stages of trauma recovery. Using a workbook as a guide, participants explore topics including the biological, relational, and psychological impacts of trauma, reconnecting with their loved ones and community after understanding how the shame of their trauma has isolated them, and making meaning from their trauma. The topics are explored in a group setting that promotes safety, connection, and a sense of commonality as recommended in trauma recovery literature (Herman, 1998, 2015).

As participants advance in the workbook alongside peers, the objective is for participants to recognize their trauma, verbalize their unique experience, receive validation from others, integrate their experience through experiential exercises and sharing, and reconnect with others. All of the lessons in the workbook are contextualized to the African culture, specifically related to shame, honor, and storytelling, which are important in the culture (Tracy & Tracy, 2014). By assessing the effectiveness of this treatment program, I narrowed a gap in the literature related to identifying a culturally contextualized trauma intervention that impacts trauma symptoms for former child soldiers.

Research Question

RQ: Is the BHW treatment program effective in reducing trauma symptoms for former child soldiers?

H_o: The BHW treatment program does not reduce pretreatment trauma symptoms as measured by the Trauma Symptom Checklist-40 (TSC-40).

H_1: The BHW treatment program does reduce pretreatment trauma symptoms as measured by the TSC-40.

Theoretical Framework

The theoretical framework guiding this study was Herman's (1992) seminal trauma recovery framework. Herman outlined concepts for defining, understanding, and treating trauma, as well as developed stages of healing. Although healing from trauma is not linear, it does follow stages that contain important components of healing that must be present for the victim to move forward (Herman, 1992). Herman's work was updated in 2015 and is still considered essential work in the traumatology field (Zaleski et al., 2016). The theory was based on Herman's work with a wide array of trauma exposure, including natural disasters, interfamily violence, sexual abuse, and military combat.

A key tenet of Herman's (1992) theory is that the outcome for a trauma survivor is influenced by the society in which the trauma occurred. Herman's (2015) findings make a powerful argument for contextualizing the environment in which the survivor heals. The BHW treatment program was predicated on Herman's (1992) theory that the healing environment must be contextualized to match the culture in which the trauma

took place. BHW was contextualized for war-affected African countries using the stages of recovery as the basis for the curriculum. The goal of the program is to reduce the negative impacts of trauma on the individual, their families, and communities. Additional information about this theory is provided in Chapter 2.

Nature of the Study

The nature of this study was quantitative using archival data to examine whether the BHW (Tracy & Tracy, 2019) treatment program (independent variable) reduced trauma symptoms (dependent variable) among adult former child soldiers who completed the curriculum. Ratings by participants on the TSC-40 pre- and postintervention were examined through statistical analysis to determine the extent to which the participants' trauma symptoms were reduced as a result of completing the program.

Definitions

The following terms, including the independent and dependent variables, were used throughout this study and defined here:

By His Wounds treatment program (BHW): A community-based trauma care model that uses an interactive workbook curriculum designed to be used in small group settings in communities that have known significant trauma with limited mental health resources. The workbook guides the participant on an educational, healing pathway that begins with understanding trauma and its effects. The curriculum integrates social science research, trauma recovery theory, and theology to impact trauma symptoms (Tracy & Tracy, 2019). The BHW treatment program was the independent variable in this study.

Child soldier: “The involvement of dependent, developmentally immature children and adolescents in armed conflict they do not truly comprehend, to which they are unable to give informed consent, and which adversely affects the child’s right to unhindered growth and identity as a child” (De Silva et al., 2001, p. 126).

Post-traumatic stress disorder (PTSD): An anxiety disorder that develops in some people after experiencing a traumatic event (American Psychological Association, 2017). Symptoms of PTSD fall into three main categories that include hyperarousal, intrusion, and constriction (Herman, 2015). PTSD symptoms was the dependent variable in this study.

Psychological trauma: “The result of experiencing or witnessing a traumatic event(s) that generally involve threats to life or bodily integrity, or a close personal encounter with violence and death” (Herman, 2015, p. 33). The core component of psychological trauma is a feeling of “intense fear, helplessness, loss of control, and threat of annihilation” (Herman, 2015, p. 33).

War conflict: According to the literature related to warfare in African countries that utilize child soldiers, the term is defined as “intense armed conflict between paramilitary groups such as mercenaries, insurgents, and militias. It is characterized by extreme violence, destruction, and aggression, using regular or irregular military forces” (Bauer et al., 2018, p. 1786).

Assumptions

Several assumptions were made in this study. First, I assumed that the archival data were accurately collected by the agencies administering the treatment program. For

example, I assumed that clear instructions for completing the assessment pre- and postintervention were given so that participants understood how to fill them out. I also assumed that the pre- and postassessments matched for each participant. Second, I assumed that the participants recorded their scores truthfully to the best of their knowledge and fully completed the treatment program and all of the curriculum work. Third, applicability of the tools was assumed; specifically, I assumed the workbook and assessments were culturally contextualized and translated accurately and appropriately for the populations participating. Lastly, regarding the statistical analysis, I assumed that the data contained no outliers and that the results followed a normal distribution.

Scope and Delimitations

The research problem addressed in this study was derived from an identified gap in the literature. The research problem was the limited research on effective, culturally derived, and theory-related treatment interventions for former child soldiers struggling to reintegrate into their communities' postconflict. The research goal was to explore the effectiveness of the BHW treatment program on trauma symptoms in former child soldiers. This treatment program had not been studied in a formal capacity for its effectiveness in reducing trauma symptoms. The treatment program was created for traumatized populations in war-affected areas of Africa and its curriculum built on trauma theory research.

The scope of the current study included within-group differences in trauma symptoms in adult former child soldiers completing a pre- and posttest assessment as they participated in a trauma recovery group. The measurement administered was the

TSC-40, a validated and reliable measure of trauma symptoms that was translated into French and Swahili. The archival sample consisted of adult males and females in northern Uganda and eastern Congo. The inclusion criteria included adult male and female participants who completed the entire treatment program and who had experienced war trauma either as a voluntary or involuntary participant in war conflict. Exclusion criteria included people under the age of 18, those who did not complete the program in its entirety, and those who did not identify as former child soldiers.

Limitations

One limitation of this study pertained to the scope of the research question. The research topic was narrow and addressed a unique population in one specific region of Africa. Therefore, the ability of the results to be generalized beyond that population and region was limited.

Another limitation was regarding the quantitative methodology. There are inherent threats to internal and external validity in quantitative studies. First, because participants were not randomly assigned and a control group was not used, the benefits of a true experiment were not present. Next, history was a threat to internal validity. The treatment groups lasted at least 12 weeks, and during that time any number of events may have occurred in the life of the participant that influenced the outcome of the treatment. Another threat was participant selection. Some participants may have had certain characteristics that predisposed them to certain outcomes such as having access to medicine that managed their symptoms while others did not. Additionally, using existing data meant the results that were collected historically may not have reflected how things

were at the time of the study. There was little control over how the data were collected, and several months went by between the data collection and when the statistical analysis was conducted. Regarding the testing measure, the TSC-40 is a self-report measure, and inaccurate or biased reporting was possible.

Threats to external validity included the interaction of selection and treatment. Because the participants had characteristics such as being a former child soldier in a certain region, the results were not generalizable to anyone who does not have the same characteristics. Next, the interaction of setting and treatment was a threat. The results were only relevant to the agencies where the data were collected. Additionally, different group facilitators, although trained the same, may have delivered the curriculum differently, thereby influencing the outcome of the results. Lastly, interaction of history and treatment posed a threat to external validity. The results were time bound to the group where the data were collected. The results were limited to that group and not other groups.

Significance

This research was unique because it addressed the effectiveness of a culturally sensitive trauma recovery curriculum that impacted trauma symptoms for former child soldiers in Africa. This population of former child soldiers had been affected significantly by war and trauma, with limited means to heal their psychological wounds and reintegrate into their communities. Through this research, an evidence-based treatment intervention was identified that showed promise for impacting trauma symptoms for war-affected participants in group settings, thereby giving them a second chance at life

postconflict. A holistic healing model that is contextualized for a specific community and population can educate and resource individuals to experience healing from trauma wounds (Herman, 2015). Additionally, the current study added to the literature on the possibility for post-traumatic growth when there is an intervention applied in the aftermath of horrific trauma, and added an intervention to the list of evidence-based treatments specific to this population. Government entities, policymakers, and donors are more apt to provide funding for treatments that demonstrate effectiveness and impact the negative societal consequences of war conflict (Denov, 2020).

One important aspect of the BHW program that makes it unique is that it does not require licensure or an advanced degree for facilitators to deliver the curriculum, which is not the case for many evidence-based treatment interventions (Hinsberger et al., 2017). Although those facilitating the program need to be trained in the curriculum, because the BHW treatment program does not require a licensed professional to facilitate, costs associated with needing formally trained professionals to deliver the curriculum are eliminated. The only cost for the program is the workbooks for trainers and participants, which is offset by the fundraising efforts of Mending the Soul Ministries.

Without an effective trauma intervention, there is little chance that former child soldiers can return to society successfully in the long term (Betancourt et al., 2020). Trauma has lingering effects that can impact a person's ability to successfully engage with others and the world (Herman, 2015). Reintegrating former child soldiers into their families and communities has positive social change implications for society on multiple levels.

When communities are accepting of their citizens returning from conflict and can provide low- to no-cost interventions to treat their psychological wounds, healed individuals can move on to obtain employment, return to school, and start families of their own, contributing to a thriving community. Positive social change becomes a ripple effect as indigenous facilitators at existing nonprofits and churches are trained and equipped with the theory-based curriculum to teach others in their communities, bringing sustainable healing to thousands of Africans a year suffering from abuse trauma due to ongoing war conflict. With a program like BHW, these communities are no longer dependent on higher resourced countries to provide them with interventions that they cannot implement on their own over time due to costs associated with materials or staffing needs. As more and more traumatized populations have access to the treatment program and experience reduced symptoms and an understanding of their trauma, they are equipped to participate in life once again, not as an ostracized outsider but as a member of their community.

Summary

Chapter 1 provided a background to the problem of child soldiers and why this subject was important to the field of trauma recovery research. Additionally, the problem statement, purpose, research question and hypotheses, and theoretical framework that guided the study were described. The nature of the study was provided, which was a quantitative archival study. The scope and delimitations and limitations to this study were also addressed. The significance of the study, which was to add to the research on effective trauma interventions for treating former child soldiers, was discussed. Chapter 2

provides a review of the literature associated with the research problem and a discussion of the theoretical framework related to trauma recovery.

Chapter 2: Literature Review

The reintegration of former child soldiers into their communities is an arduous task for treatment professionals. Complex trauma impacts the individual and community due to the lingering effects that follow these children long after the conflict subsides. Not only do former combatants, of any age, require their basic needs to be addressed, such as shelter, medical care, and food, but also their mental health declines if the trauma is not addressed. Complex trauma is not easily treated without resources and support for the individuals and communities facing reintegration after a war (Herman, 2015). Upon returning home, former child soldiers are often looked at with mistrust and disdain for the war atrocities they may have committed against their own families and neighbors, making it difficult to access care for their basic needs (Betancourt et al., 2020).

Without strategic and evidence-based support for the traumatized youths and community level support for reintegration efforts, the cycle of violence and untreated mental health conditions wreak havoc on already fractured and devastated communities. Former child soldiers are a vulnerable population that are forced to participate in conflicts against their will and comprehension. Participation in armed conflict means abruptly leaving the safety of home, family support systems, and educational pursuits. Children are forced to live in the bush with little to no survival skills. They are indoctrinated to an army's war rhetoric, often in cruel and inhumane acts against family and neighbors (Denov & Lakor, 2017). Some children spend years as combatants until the conflict subsides, suddenly having nowhere to go and no other purpose but to return home to communities that may look vastly different than when they were first forced to leave.

The purpose of this study was to determine the effectiveness of the BHW (Tracy & Tracy, 2019) treatment program to reduce PTSD symptoms in former child soldiers participating in group therapy in a region of Africa. The literature review addressed historical and current studies on former child soldiers to determine best practices for treating trauma and facilitating reintegration efforts.

First, the history of child soldiers was presented as a basis for understanding the problem. Second, research related to the individual and societal impacts of trauma showed the need for specific interventions targeted at this unique population. Next, as Betancourt et al. (2020) looked at the phenomenon of child soldiers growing up and returning home, several overarching themes emerged from the literature regarding reintegration and best practices to help this population have a second chance at life after trauma and these themes were reviewed. Finally, based on the most current research recommendations that came from studies on trauma interventions, a gap in the literature was identified warranting the examination of the effectiveness of a culturally contextualized, community-based trauma curriculum in reducing trauma symptoms for former child soldiers.

Literature Search Strategy

The keywords and combinations of keywords searched for this literature review included *child soldiers, trauma interventions and child soldiers, trauma models in Africa, and treatment of child soldiers, armed conflict and trauma, trauma treatment and war,* and *trauma treatment and former child soldiers*. Databases used in the search included PsycINFO, SAGE Journals, PsycARTICLES, and a Thoreau multidatabase search. The

literature review included peer-reviewed studies published between 2016 and 2021. Seminal research was also used as a basis for the literature review.

Theoretical Framework

The theoretical perspective for this study was Herman's (1992) theory of trauma recovery. Herman proposed five key components of recovery that are necessary to recover from any type of complex trauma: (a) healing relationship, (b) safety, 3) remembrance and mourning, (c) reconnection, and (d) commonality. Herman (2015) condensed the therapeutic tasks of the five stages into three overarching stages: (a) safety and stabilization, (b) integration, and (c) reconnection, which is referred to in the literature as the 3-stage healing model. Within this framework, the BHW (Tracy & Tracy, 2019) treatment program was created. Herman (2015) asserted that psychological trauma is influenced by the culture in which the trauma took place; therefore, the environment for healing must be contextualized to match the culture the survivor is living in (Zaleski et al., 2016).

To understand the effectiveness of the BHW curriculum (Tracy & Tracy, 2019) in reducing trauma symptoms for those suffering from complex trauma, I used Herman's (1992) model as a lens through which to study this curriculum, which was contextualized for this population. Herman's model of trauma recovery offered a theoretical standard for measuring the outcomes of this curriculum to impact trauma symptoms. Similar studies on the effectiveness of trauma intervention for war-affected populations have also included Herman's stages of recovery theory (Berthold et al., 2020; Stepakoff et al., 2006).

The essence of trauma is its destructive force on social systems of care, protection, and meaning central to human life. Healing from trauma involves the reconstruction of new systems that support safety, grieving, and connection to others. Trauma recovery research demonstrated that healing takes place in stages, and although the stages may overlap, they follow a general progression (Herman, 2015). For example, until safety and stabilization occur for a survivor, they will not be successful in later stages in making meaning from their trauma or reconnecting with others when their symptoms are overwhelming and frightening. This process takes precedence over all other therapeutic tasks or stages. This initial stage may take days, weeks, or months depending on the acuity and chronicity of the trauma (Herman, 1998).

Safety and Stabilization

A guiding principle of trauma recovery is to restore power and control to the survivor. Trauma renders a person helpless, and trauma recovery occurs in the safety and stabilization stage. As Herman (1992) asserted, trauma recovery cannot occur if the intervention does not foster empowerment or if the intervention takes power away from the survivor. Although each stage may look slightly different for each person depending on variables such as resiliency, support systems, and length of time between trauma and intervention, research across evidence-based interventions supports trauma healing occurring in stages (Herman, 2015).

Once safety and stabilization has been established, along with a therapeutic alliance, the second stage of recovery is reached. This stage of remembering and mourning is the integration of the trauma through the retelling of the story. The traumatic

memory is reconstructed and integrated into the survivor's life story. What once was a compilation of fragmented, disorganized, and frozen memories is now organized, coherent, and situated within the context of the survivor's life (Herman, 1998).

Integration

In this second stage, a survivor explores their beliefs about their trauma and wrestles with cognitive distortions related to self-blame or questions that cannot be answered that come up as they retell their story. Further, a survivor must mourn the loss of their life before the trauma, including their loss of a sense of safety and the ability to trust others or the world. A survivor must confront a changing worldview that no longer makes sense in light of what happened to them. Although the goal of the stage is not to be able to answer every question, it is intended to help the survivor reclaim their history and emerge with a narrative that is their own and is no longer fragmented and confusing. The trauma narrative becomes past tense and does not overpower the survivor in the present due to the integration that has taken place while affirming the work of continued safety and stabilization from the first stage (Herman, 2015).

Reconnection

As the trauma survivor emerges from the integration stage with an altered worldview and a new trauma narrative, they are ready for the tasks associated with the third stage of recovery, which involve reconnection. Herman (2015) emphasized that trauma drives disconnection and isolation, and healing can fully occur only within the context of relationship. Trauma damages a person's ability to enter a trusting relationship because their views about trust have been shattered by the traumatic experience. The

basic human capacities for trust, autonomy, initiative, competence, identity, and intimacy must be rebuilt within the context of relationships that occur in a safe community with others. Trauma cannot be healed in isolation (Herman, 1998, 2015).

As the survivor has worked through damaging beliefs in the second stage, by the third stage they are ready to reconnect with a previous support system or construct a new one with people who are now part of their new narrative, such as a therapist, minister, or support group that has helped them in their recovery. This stage is also where it is common for survivors to discover a new mission or purpose that helps give meaning to their pain. Although challenges will continue to arise and trauma is never fully healed with the completion of a treatment intervention, the person who traverses through the stages will experience integration of their narrative and freedom from the powerlessness that the trauma initially caused (Herman, 2015). A person cannot find meaning in trauma without first seeing their experience as a cohesive story with an end and a beginning. Likewise, a person cannot achieve integration of their story without first securing safety physically, emotionally, and relationally, thereby affirming the need for subsequent stages of healing (Herman, 2015).

Emergence of Child Soldiers as a Weapon of War in Africa

The rise of the use of child soldiers began in Africa in the 1980s and came to the attention of the world due to the horrendous concept of using children as weapons of war, particularly in Uganda's war against the LRA. Led by Joseph Kony, the LRA was formed to counter the oppression of the Alcholi tribe by the Ugandan government. However, the rebel group adopted aggressive war tactics such as mass killings, sexual and physical

assaults, abductions, and civilian torture (Denov & Lakor, 2018). Although the LRA's main goal was to avenge the massacre of the Alcholi tribe by the Ugandan government, over time, Kony was persuaded that anyone who did not voluntarily join or support the LRA was actively colluding with the Ugandan government and targeting their own civilian population. The LRA also became notorious for recruiting children to commit war crimes. During this 20-year period, between 60,000 and 80,000 child abductions were committed by the LRA (Kane et al., 2016).

This forced recruitment saw children become combatants and sex slaves for the resistance army as they were trained for survival in the bush (Ertl et al., 2011). Children were preferred because they would not know the area well enough to escape, they would be easier to indoctrinate, and the tactic terrorized communities and villages into allegiance (Denov & Lakor, 2017). In addition to child soldier recruitment, 1.7 million people were displaced and forced to flee their villages to escape the terrorism of the warring tribes and government (Denov & Lakor, 2018). This devastated nearly the entire region of northern Uganda.

Despite the formal end to the war in 2007, ongoing violence eroded the economic infrastructure and the cultural, health, and education systems throughout Uganda (Denov & Lakor, 2018). Families were torn apart, villages were demolished, education was halted, and life's daily activities were interrupted for Ugandan citizens. Most disturbing of all, however, were the brutal human rights violations that took place regularly, which included abduction, forced marriage, servitude, and forced impregnation. Although the hostilities formally came to an end in early 2008, in other areas in Africa the effects of

the war have persisted as rebel tribes were pushed out but continued to engage in conflict (Kane et al., 2016). The introduction of child soldiers as a weapon of war has led to 250,000 children younger than 18 years of age being involved in war in 14 countries worldwide with the magnitude of effects having been fully realized only when they returned home to their ravaged communities (Kane et al., 2016).

Current Use of Child Soldiers in Africa

In the mid-1990s, the United Nations Committee on the Rights of the Child (2011) organized a Day of General Discussion in 1992 on Children in Armed Conflict. At that time, the Secretary General of the United Nations appointed a Special Representative on Children in Armed Conflict who continuously communicated research findings regarding the current involvement of children in armed conflict around the world (United Nations Committee on the Rights of the Child, 2011). In 2018, the most recent report of the Special Representative on Children in Armed Conflict found that 15 years after the United Nations resolution to set the minimum age of recruitment of children in armed conflict to 18, rates of incidents involving children under 18 being recruited or forced into conflict continued to rise (Garbarino et al., 2020).

Although the United Nations has condemned the use of child soldiers, small rebel groups continue to recruit and use them to fight in certain areas around the world. In settings where there is a lack of societal, political, or military sanctions to restrict ongoing violence, there continues to be extreme violence within rebel militia groups and criminal organizations that still operate (Robjant et al., 2020). For example, in the 2018 report of the Special Representative on Children in Armed Conflict, child soldiers were more

commonly found to be involved in groups not affiliated with state or governments, such as Boko Haram in Nigeria and the Islamic State of Iraq in the Middle East, both notorious for their recruitment and use of child soldiers.

Certain regions in Africa, especially in the DRC, become trapped in a cycle of rebuilding and reintegration attempts after war, followed by outbreaks of fighting between small militia groups that pull former combatants back into their former roles as soldiers (Robjant et al., 2020). The continued threat of violence against their families or themselves makes it difficult for former child soldiers to resist engaging in the conflict, even after they have made attempts to rebuild their life. This transition back to fighting as a soldier is due partly to untreated mental health issues related to PTSD, which can lead to reactive aggression. Similarly, appetitive aggression may play a role in the continued recruitment of child soldiers. Appetitive aggression draws an individual toward recalling, planning, witnessing, or perpetrating violence for personal gratification (Robjant et al., 2020). These untreated mental health conditions related to war conflict perpetuate the cycle of violence for former child soldiers and make them available for continued use by militia groups. This contributes to the ongoing instability in these countries and makes the need for effective and accessible mental health treatment imperative to stop the cycle (Robjant et al., 2020).

Child Soldiers as a Social Problem

Social Impact

International organizations, such as the World Health Organization (2013) and United Nations Children's Fund (1996) have had to address the impact of the use of child

soldiers on countries by publishing evidence-based recommendations and best practices to help countries rebuild after war and for other agencies assisting in the reintegration efforts. Specifically, war-torn countries that enlist child soldiers face the issue of reintegrating these children back into their families and communities once the conflict subsides. These countries are faced with many displaced children, adolescents, and young adults returning to their homes after escape, rescue, or release from conflict (Ertl et al., 2011).

For example, in 2017, 420 million children, nearly one in five, were residing in conflict affected areas. This number represented a 30 million increase from the prior year (Denov, 2020). The emergence of severe mental health disorders, particularly PTSD, make it difficult for reintegration to occur. Additionally, these young people are met with distrust, suspicion, and fear by their communities as they were often forced to commit atrocities against their own families and neighbors (Ertl et al., 2011). Without proper social programs and interventions in place, reintegration efforts are challenged to succeed (Garbarino et al., 2020). Interventions can be costly as many low to middle-income countries lack the trained personnel and resources needed to implement them (Robjant et al., 2019). These challenges make it difficult for communities to thrive and grow when they do not have the resources to support their own citizens with the help they need to heal from their trauma. These small rural communities lack the infrastructure to support the ongoing physical, economic, and mental health needs of returning soldiers (Denov, 2020). When reintegration fails, economic recovery, social integration and reconstruction is jeopardized (Pfeffer & Erdal, 2015).

Stigmatization Impact

One major threat to social reintegration is the stigma associated with being a former child soldier. Community and family stigma have been identified as significant barriers to acceptance, well-being, and belonging (Denov, 2020). Often the former combatants continue to engage in violence stemming from the consequences of ostracization from community, interfering with peacekeeping efforts and perpetuating the destabilization cycle for communities (Robjant et al., 2019).

Communities try to protect themselves from the threat of ongoing violence by socially isolating ex-combatants, but this isolation and exclusion only exacerbates the psychological distress of the former soldiers and perpetuates the economic disadvantages of lost education and work (Pfeffer & Erdal, 2015). When former child soldiers are viewed as criminals by their community, they are shunned and face social exclusion. This adds to the challenges of re-entry including finding housing and employment, which are additional areas of discrimination (Garbarino et al., 2020).

Stigma extends not just to ex-combatants that have engaged in war atrocities, but towards mental illness. People with mental illness are commonly stigmatized in African countries due to a lack of understanding the etiology, treatment, and prognosis of disorders (Pfeffer & Erdal, 2015). Traditional African beliefs attribute mental illness to spiritual causes and thus view healing through the recommendations of traditional healers. Former child soldiers suffering from PTSD symptoms and other mental health disorders are viewed with additional fear and suspicion (Pfeffer & Erdal, 2015). Beliefs about the causes of mental illness often prevent patients from seeking treatment. This

widespread stigma of mental illness leads to negative impacts on interpersonal relationships, exclusion from social support, barriers to healthcare, and limited access to employment opportunities (Betancourt et al., 2020).

Betancourt et al. (2020) examined how the post-conflict environment could help or hinder social reintegration efforts in Sierra Leone. To address whether family and community supports were associated with reducing long-term negative consequences of war exposure, the researchers followed a cohort of former child soldiers from the end of the hostilities into adulthood. Participants were sorted into groups based on reported changes over time in stigma, family and community acceptance, and group membership, such as being an employee or student. Those in the cohort that were considered "socially protected" were identified as experiencing community and family acceptance, forgiveness, and participated in traditional community healing interventions.

The "socially protected" participants had better long term outcomes for protective factors that led to less mental health issues later in adulthood, lower levels of attempted suicide, and lower levels of perceived stigma. Conversely, those in the "socially vulnerable" group were two times more likely to experience levels of anxiety and depression considered above the clinical threshold. They were also three times more likely to have attempted suicide, and more than four times likely to have experienced trouble with the police (Betancourt et al., 2020). Betancourt et al. (2020) identified three post conflict factors that appeared to have affected outcomes in adulthood for former child soldiers and these included family and community acceptance and stigma. Community and family ostracization based on the stigmatization of former child soldiers

hinders a community's ability to heal and grow and stunts the social reintegration of the soldiers (Betancourt et al., 2020).

Most studies regarding former child soldiers focus on the experiences of the ex-combatants returning home and the difficulties they face. Few studies related to child soldiers have examined the community perception of these returning residents and how it affects reintegration. However, the attitudes of the community, including medical and mental health professionals, as well as educators and religious leaders, play an integral role in the psychosocial adjustment of former soldiers. Pfeffer and Erdal (2015) examined the beliefs of health professionals, lay people, and health professional trainees towards individuals with PTSD that they perceived as victims of the LRA versus those they perceived as a former soldier that participated with the LRA. The researchers expected the most stigmatizing attitudes to be towards those who were viewed as former soldiers with PTSD rather than a victim of the LRA with PTSD. Participants included 119 people from northern Uganda. Those in the health professional category were recruited to observe how education and exposure to mental illness affected stigmatizing attitudes. Lay people were recruited to serve as a comparison sample and to gain insight into the average person's level of stigma.

Participants were presented with two vignettes that described a hypothetical situation involving a man that displayed symptoms of PTSD (Pfeffer & Erdal, 2015). In one scenario the man was depicted as having been forcibly recruited by the LRA and was forced to rape and kill people. The other vignette described a man that had been forced to witness his family being killed by the LRA and was suffering from PTSD symptoms. The

participants were then assessed using measures designed to capture attitudes related to social stigma.

The results indicated that there were slightly more stigmatizing attitudes among the health professionals than lay people towards the vignette character viewed as a soldier, but overall, participants did not stigmatize the LRA soldier more than the LRA victim. One reason for this finding could be attributed to the people in this community viewing soldiers as victims, understanding that the harm they inflicted during the conflict was against their will and likely a means for survival. This understanding leads to more accepting attitudes of returning child soldiers and helps immensely with the reintegration process.

Pfeffer and Erdal (2015) noted a key limitation of not validating the concept of stigma to the community the study was done. While the vignettes were adapted to the local community, future research should work to ensure cultural equivalency for all concepts being measured. Additionally, the effect sizes were small. The sample sizes for the groups were small and comprised of convenience sampling, thus limiting the generalizability and representativeness of the population (Pfeffer & Erdal, 2015). However, the results are important in highlighting the support that is needed from the community to rehabilitate and reintegrate those suffering from mental illness due to war, and this includes the repercussions of social stigma and isolation. When stigmatizing attitudes are absent, or not held by the majority of those in a community, resilience among former child soldiers increases and the cycle of generational poverty and destabilized families due to war is broken.

In a similar study to Pfeffer and Erdal (2015), Schiltz et al. (2016) explored the process of, and challenges associated with, social reintegration from community members' perspectives to better understand the stigmatization of child soldiers returning home. Relational and social problems relate to the changed relationships between family members and a community as well as the disruption to the social ecology of the community because of armed conflict. From the viewpoint of community members, formerly recruited children are seen as both victim and perpetrator, which affects their position in the home and community when returning home.

Schiltz et al. (2016) recruited 267 community members that included formerly recruited youth, non-recruited youth, parents, elders, leaders, and teachers in several villages in northern Uganda. Data collection sessions were conducted based on focus group methodology to include interviews and discussion. Participants were organized by the category they identified with. The qualitative data was used to analyze patterns and further understand how the community members experienced and handled relational and social challenges. Several themes emerged from the data that explained the rise of stigmatization. First, a central theme was fear that the former soldiers would continue their behavior that they used in the war such as stealing, raping, killing, and burning down homes once they returned. Some of the youth responded aggressively to insults by community members, further impeding social interactions. Additionally, formerly recruited youth tended to isolate and experienced difficulty interacting with community members, further reinforcing relational challenges between the various groups of community members.

The next theme that emerged was perceptions of maladjusted behaviors learned in the bush that continued once the youth returned to the community, despite different expectations of the community. For instance, “bush behaviors,” such as having long hair and nails and eating leaves were viewed fearfully and affirmed the community’s view that these youth could not cope with the community’s expectations of socializing and communicating, further adding to the fear and mistrust of these youth (Schiltz et al., 2016).

The third theme was related to resentment and forgiveness for atrocities committed during the war. Recruited youth recalled comments by other community members referring to them killing their family members. This blame and the insults directed towards them for past acts further pushed these youth to the fringes of their community to avoid the shame and possible acts of retaliation. Segregation and discrimination became more frequent, further complicating social and relational healing efforts (Schiltz et al., 2016).

Schiltz et al. (2016) then explored themes related to resources that community members viewed as instrumental in helping combat the social and relational difficulties that promoted stigmatization. First, amnesty that was provided by the government gave the recruited youth more confidence to stay in their communities. Amnesty programs helped communities understand the power of forgiveness and educated people about the harmful effects of insults and discrimination.

Teachers, leaders, and elders were viewed as having a significant role in promoting social connectedness by making the youth feel accepted and loved. Being

included in activities such as farming, sports, and praying increased hopefulness and feelings of relief and happiness. Cultural practices such as dance and storytelling helped promote connectedness and coping with social challenges. Schiltz et al. (2016) concluded that interventions aimed at reintegration should be tailored to the cultural practices of the community and include all members of a community and acknowledge the social and relational challenges that are most prominent and compelling, such as fear of formerly recruited youth. Holistic interventions that focus on individual, social, and cultural domains and are community-based were considered beneficial among the community. The researchers acknowledged the complex process of reintegration that goes beyond just social and relational issues. Also, the results were limited to the communities where the interviews and focus groups were conducted but still shed light on important aspects of the reintegration process that can be used in future research to inform best practices to help communities heal (Schiltz et al., 2016).

Economic and Educational Impact

Another social threat communities are faced with is their citizens returning with little to no education and a lack of job skills to obtain employment. Scholars agree that former child soldiers have more negative educational and job market experiences than civilian populations (Trussell, 2018). Military conflict inhibits the development of a country and poor countries that have ongoing conflict have higher poverty rates than stable countries (Burde et al., 2017).

Uneducated masses can further contribute to the cycle of instability as unemployment and lack of education can go on for generations, stifling the economic

growth of a society. Research on education in conflict areas has established that education is a humanitarian need and human right as it affects not only individuals, but communities and global economies over time (Burde et al., 2017). Education has been shown to have a relationship to state stability in conflict areas and thus is a priority alongside humanitarian aid in crises such as war. Education leads to a range of positive outcomes like child protection, economic development, peacebuilding, and reintegration (Burde et al., 2017).

Even if the former child soldier is eager to gain employment or return to school post conflict, they have difficulty finding or maintaining jobs, or paying for the education they need to qualify for employment. As their education was interrupted as children, former child soldiers' lack of education prevents them from becoming meaningfully employed and making contributions to the economy (Garbarino et al., 2020).

Bauer et al. (2018) showed that military service and combat exposure lowers earnings and employment opportunities for former child soldiers due to the education deficit, stigma against them in the community, and lingering mental health conditions. Rural communities that former child soldiers return to often lack the resources to offer job training or help them resume their education.

Compounding the issue, those that try to return to educational settings face difficulties with their mental health symptoms, thus interrupting the learning process, leading to high dropout rates and subsequent unemployment rates. Further, the ongoing stigma and discrimination experienced by former child soldiers in school often leads to them not returning at all or dropping out. Abducted children have 10 percent less

schooling than non-abducted peers, are more than twice as likely to be illiterate, and have a 33 percent lower income (Brownell & Praetorius, 2017; Trussell, 2018).

Being prevented to returning to school, which is a positive group membership that can create a healthy sense of identity, leads to former child soldiers returning to armed conflict as a way to be accepted, thereby continuing the cycle of destabilization within a community (Garbarino et al., 2020). Under-resourced communities cannot offer these struggling citizens support to return to school, and neither can they offer support to those not able to work, adding to the negative economic impact on the community (Betancourt, et al., 2020; Garbarino et al., 2020).

Economic. Many rehabilitative interventions for former child soldiers focus on psychological trauma treatment, which is an integral part of the reintegration process, but is still only a part. One of the most successful ways to facilitate reintegration of former child soldiers is by way of employment (Bertelsen, 2015). Having a job allows the person to fulfill culturally accepted roles such as being a helper and provider within their family. While psychopathological symptoms can be carried into adulthood and affect an individual's livelihood and quality of life, a holistic approach that offers support for the initial mental health injuries but also vocational skills, job placement, and financial support has better sustainability for communities in the long run. Holistic approaches focus on community living as well as psychosocial support (Van Leeuwen et al., 2018).

Van Leeuwen et al. (2018) conducted a qualitative study to profile the qualities of holistic community reintegration programs for former child soldiers in northern Uganda. Using a convenience sample of 37 former child soldiers, the researchers

completed semi-structured interviews regarding the participants' living situations and resources to assess their transition back into the community to characterize the nature and success of their community reintegration.

At the time of the study, Van Leeuwen et al. (2018) identified 75 vocational training institutes throughout the region that helped participants integrate into the workforce. However, only two were specific to addressing the needs of former child soldiers. The participants were identified through snowball sampling techniques with the assistance of one of the rehabilitation centers. The age of the participants ranged from 17 to 34 years. The education level of the participants showed that 95 percent had less than the equivalent of a high school education. The literacy rate of the participants was low; therefore, survey protocols were administered verbally. Two main themes relating to integration emerged from the data to include psychosocial issues and workforce development.

The psychosocial issues faced by the child soldiers returning included stigmatization and rejection by family and peers, making it difficult to find a marriage partner or inherit their family's land to contribute to the economic growth of their community by starting a family and farming the land. Next, participants expressed a need for financial support and skills training to improve their lives and their socioeconomic status. The participants wanted to learn computer skills, technical skills, and farming skills. Without the ability to pay for school fees, the chances of the participants returning to school to obtain a degree or technical certificate was low. Most of the participants

expressed a desire and willingness to be involved in their community in meaningful ways if they had the financial means or skills to do so (Van Leeuwen et al., 2018).

Van Leeuwen et al. (2018) concluded that reintegration programs should adopt a holistic approach to address the intertwined psychosocial and livelihood issues faced by former child soldiers. Both issues present challenges for reintegration efforts. While untreated trauma and mental disorders can preclude victims from searching for work and being employable, once they become stable, they are at risk for relapse if the community does not provide opportunities for them to improve their lives through training or financial assistance to return to school. Limitations for this study include the small sample size, reducing confidence in the conclusions. Additionally, the results may only be generalized to the specific region in Uganda where the participants resided. Van Leeuwen et al. (2018) encouraged larger studies to include more regions and rehabilitation centers for former child soldiers to understand the value of a holistic model of reintegration more fully for communities.

Vocational education and training programs can promote the socioeconomic development of a community by focusing on its marginalized citizens (Altangerel & Chaves, 2017). In many sub-Saharan African communities, the formal education system is not accessible to the general population, especially the marginalized. Small and medium enterprises in Uganda have been shown to function as a backbone to the country's economy but barriers exist that prevent them from being used more to help the plight of a former child soldier returning home.

Altangerel and Chaves (2017) explored the viability of small and medium enterprises in Uganda to provide vocational education and training programs specifically for those reintegrating back into their communities as former child soldiers. Specifically, they reviewed the viability of a bakery business in a particular region to train and employ former child soldiers rather than outsourcing their needs to nearby cities. The researchers explored employment opportunities that would contribute to the process of reintegration through improving skills, knowledge, and socioeconomic and psychosocial conditions.

Altangerel and Chaves (2017) found similar organizations that were working with girls who had been a part of the LRA and because of their experiences, facing little education and no job prospects due to their risk factors. Altangerel and Chaves found that these bakeries were successful and that the participants, usually from nearby refugee camps, would go on to further their education and remain sustainable in their communities. The bakeries also provided basic education in numeracy and literacy, as well as nutrition fundamentals. After a year of training, the participants could go on to manage their own business.

Altangerel and Chaves (2017) found that the bakeries not only provided job opportunities and increased skills but provided a way for former child soldiers to interact with their fellow community members in a productive way that reduced social stigma and promoted healing. Altangerel and Chaves concluded that the bakery programs were an example of a holistic approach to reintegration that benefitted the local economy while improving the social conditions of the former child soldiers.

Another economic issue that former child soldiers and their communities face is land ownership. During the years of the war, many families' land was either stolen, abandoned, or difficult to maintain due to the consequences of active military conflict in the area (Denov & Lakor, 2017). Land is acquired through the paternal side of a tribe or clan. Children born in captivity to former child soldiers who cannot reunify with their family due to stigma or not knowing the origin of their clan no longer have an inheritance to claim for sustained status in the community. Additionally, women typically do not own land in Africa yet are responsible for nearly 80 percent of the agricultural labor (Bertelsen, 2015). When a woman does own land through a familial inheritance, by law it is transferred to the husband when she marries. Former female child soldiers also faced loss of any inherited land upon return from war due to the shame associated with their time with the LRA or children born to them from war violence (Denov & Lakor, 2017).

Education. A key element for a former child soldier to find sustainable work is completing their education so that they have the basic skills required for employment. Additionally, the school environment, if supportive, can be part of the reintegration process for them. Former child soldier participants spoke of attending school as having many advantages to returning to the community such as making friends, building opportunities to have an easier life that education affords, and a welcome distraction from troubling memories of their time in the war (Vindevogel et al., 2017). Families that could not or would not pay school fees contributed to the threat of losing an important resource critical to reintegration, thus creating a "resource loss spiral" for the participant (Vindevogel et al., 2017). This loss of a perceived resource can put the participant at risk

for returning to armed conflict to belong, find a sense of purpose, and income (Red Cross, 2019).

Education is more than a route to employment in that it creates normalcy and helps the former child soldier develop an identity separate from being a soldier (Bertelsen, 2015). Consequently, disruptions in the provision of education for a former child soldier can fuel conflict. A lack of educational opportunity, which ultimately leads to employment, can be a predictor of continued conflict. Young people may be more inclined to join or reenter an armed conflict if there are no other alternatives to learning or working, which are key components to having hope for a future. For example, youth in Sierra Leone were found to be nine times more likely to join an armed conflict than youth who attended school (Burde et al., 2017).

The school environment has also been shown to be a protective factor for those affected by war conflict. When discussing resources that were helpful in transitioning back to civilian life, several of the participants in Vindevogel et al. (2017) emphasized the impact of attending a boarding school away from their community where no one knew them. It gave them a chance to start over, without the stigmatization from family, neighbors, and peers. They reported being able to focus on their studies more and develop a vision for a future other than being a soldier. The school setting can also provide psychosocial support to students that helps them recover from crisis.

Studies have shown that improvements in mental health have occurred in schools where problem-solving skills, relaxation skills, stress management, and an integration of art and recreational activities are used with students that have been exposed to war

conflict (Burde et al. 2017). However, access to formal school settings may not be an option due to financial constraints or physical buildings being destroyed or neglected during the war. In these instances, studies have shown that community-based education shows clear and significant effects on raising achievement levels of students when formal school programs are not available (Burde et al., 2017). Structured and meaningful activities that are prosocial in nature, offering support and care to children in a community can offset the effects of the crisis and still make a difference in their well-being, even if informally.

During the active years of the conflict in Uganda, neglect, a lack of investment and citizens, created major gaps in school infrastructure, classrooms, and availability of teachers. Physical buildings were damaged, children were forcibly recruited into the conflict, and families separated or massacred, indelibly altering the school system (Bertelsen, 2015). In 2002, Uganda adopted Universal Primary Education which provided free primary school education to citizens. However, barriers to accessing education remained in place for former child soldiers. Missing out on the foundational years of school that were free placed former child soldiers behind their non-soldier peers academically. To return to higher education required school fees, which could not be paid for without an income or a family with the means to do so. Therefore, the only occupational activities available to them became cultivating crops, which represents a difficult life of manual labor with little to no opportunity to achieve a higher socioeconomic status (Bertelsen, 2015). This malignant cycle where lack of access to

education and subsequent economic difficulties leads to generational poverty and illiteracy, impacts the health, vitality, and growth of a community.

Individual Impact. The insidious effects of being a child soldier first take root in the individual before expanding out to affect families, communities, and society. Negative effects impact mental health, socioeconomic status, and social supports. Denov and Lakor (2018) examined the experiences of 60 children ages 12-19 at the time of the interviews that had returned to their communities after being in captivity under the LRA.

Common reported experiences included a multitude of consequences that impacted them beyond the war, like stigmatization by family and neighbors because of their association with the LRA, physical violence at the hands of their family or caregivers, and lack of identity with and belonging to their original clan or tribe due to the violence committed against them in the bush and the shame attached to it.

Economically, some of the returning youth could no longer inherit their family's land, a critical part of their rural farming heritage and survival, and often were deprived of material items such as food, clothing, and health care in favor of family members that remained in the home during the war.

Lastly, the participants cited a disruption in their education upon returning home. If other children were in the home that had not been associated with the war, or born while the participants were away, they could attend school first. The participants summarized their return home as less desirable than being in captivity due to the level of resentment, disgust, shame, and often violence they returned to because of the strong stigma attached to their LRA association (Denov and Lakor, 2018).

Denov and Lakor (2018) concluded that reintegration efforts had drastically failed these young adults and pointed to a need for ongoing interventions tailored to the unique experiences of war-time youth that include livelihood programs, education, community reconciliation, and psycho-social support. The participants expressed a need for training local supports such as religious and political leaders, and formerly abducted persons already well-established in the community to aid with ongoing reintegration and rehabilitation to mitigate the variety of negative impacts on them that include their mental health, pursuit of education and employment, and ability to connect and benefit from social support (Denov & Lakor, 2018).

Mental Health Impact

Exposure to war atrocities is linked to an increased risk for PTSD (Kane, 2016). Studies consistently show that child soldiers report higher levels of anxiety, PTSD, depressive, and somatic symptoms than control groups (Betancourt et al., 2020; Denov & Lakor, 2018; Denov, 2020; Kane, 2016). Unfortunately, few mental health resources are available to these populations that address the unique psychological challenges faced by war-affected youth (Newnham et al., 2015). In Denov's (2020) review of recent longitudinal studies on the outcomes for former child soldiers, the need for more information was emphasized to inform post-war interventions that increase the likelihood for success later in life for former child soldiers.

Current guidelines for the treatment of PTSD and other mental health issues related to war conflict are tailored to highly resourced settings, which is not the case for many low to middle-income countries where war is taking place (Kane, 2016). The most

impacted regions in Africa consist of poor communities with few trained professionals to administer mental health services. Left unaddressed, rampant mental health problems and disconnection from natural support systems like family and community lead to severe post conflict woes for war affected countries with ripple effects that far outlast the war (Denov, 2020).

Early Studies on the Mental Health Impact of War. Some of the earliest studies emerging from the war in Uganda demonstrate the impact of armed conflict on mental health as being similar to what the most recent studies are finding. Derluyn et al. (2004) began studying child soldiers in outlying areas as northern Uganda remained a security threat at the time of the study as the war was still going on. In this mixed methods study, participants were recruited via radio announcement and asked to participate in the study at a World Vision child rehabilitation center. From 301 participants above the age of 12, 75 were randomly selected to complete the Impact of Event Scale-Revised and a semi-structured interview.

Derluyn et al. (2004) categorized different traumatic experiences the children had been exposed to, including seeing someone killed, seeing a family member killed, and having to kill someone themselves. Most participants had been abducted at the age of 12 and were held captive for a mean period of two years. Additionally, 10% of the participants were orphans due to their parents being killed because of the violence. Results from the assessment showed high rates of PTSD symptoms among the children. Ninety-seven percent of the participants had a clinically significant score.

Derluyn et al. (2004) found that the age of the child, the length of the abduction, and the time between their escape and the research did not affect PTSD. Even children who escaped several years prior still showed clinical scores for PTSD. Derluyn et al. acknowledged the limitation of the lack of a control group due to ongoing war. A summary of the interview findings demonstrated the stigmatization and blame often placed on former child soldiers for the acts they are forced to commit against their own people, complicating their psychological recovery and reintegration.

Not only does the experience of becoming a child soldier significantly enhance the risk of PTSD and other mental disorders, but the ongoing acts of violence perpetrated by them can be a form of trauma (Hecker et al., 2013). A study with veterans concluded that perpetrating violence, such as killing or raping, leads to an increased risk for developing PTSD. This phenomenon was described as perpetrator-induced traumatic stress (MacNair, 2002). The concept of perpetrator-induced traumatic stress compelled Hecker et al. (2013) to explore the mental health effects of forcible combat in former child soldiers.

Hecker et al. (2013) hypothesized that those who were forced to commit violence, as opposed to combatants that voluntarily joined the armed conflict, would experience more negative impacts on their mental health. The researchers conducted 224 interviews with Congolese former soldiers residing at a demobilization camp. The Posttraumatic Stress Diagnostic Scale and the PTSD Symptoms Scale Interview were used to assess symptom severity and classify what types of traumatic events the participants had experienced. The results were significant and indicated a positive correlation between

PTSD symptom severity and perpetrated violence in forcibly recruited combatants. Hecker et al. noted the subjectivity of the interviews as a limitation.

Hecker et al. (2013) recognized that a combatant's perception of violence may have influenced their ratings on the assessment. Perpetrating violence is not traumatic for all combatants. In the study, voluntary combatants found violence appealing and fascinating, a potential mitigating factor against the development of PTSD. Voluntary combatants showed no correlation between perpetrated violence and PTSD symptom severity. Future studies should differentiate between participants' perception of being voluntarily recruited versus forced, due to the difference in symptom variance.

Hecker et al. (2013) determined that for forced combatants, carrying out violence against their own villages or ethnic groups was more aversive than experiencing violence. They concluded that future research should attempt to determine a causal relationship between perpetrated violence and mental illness. The cross-sectional design of the study and the specific sample would not allow for establishing causality. The degree of generalizability to other populations was limited due to the specificity of the population and region from which they were engaged in conflict. The results indicated that perpetrating violence is positively related to trauma-induced mental illness in combatants (Hecker et al., 2013).

Current Studies on the Mental Health Impact of War. Garbarino et al. (2020) referenced Hecker et al. (2013) findings related to perpetration-induced trauma in their work on comparing the vulnerabilities of child soldiers with youth gang members. Like Hecker et al., Garbarino et al. noted the perpetration of violence rather than just the

observation of violence as adding to the mental health burden of child soldiers. The perpetration of violence violates moral agency, creating a moral injury that can induce trauma in a developing child. These effects are long-lasting and traumatic memories and symptoms have been shown to be recurrent even 16 years post conflict (Garbarino et al., 2020). Beyond experiencing the trauma itself, the commission of violence and subsequent alterations in their feelings about themselves and their morality can be profoundly damaging for a former child soldier returning to their community. The guilt and trauma, combined with low levels of social support and high levels of stigma and discrimination, set the stage for mental deterioration and the development of complex PTSD (Garbarino et al., 2020).

A similar study conducted by Sommer et al. (2017) demonstrated the effects of perpetrating violence on the development of trauma and substance use among high-risk males in South Africa. The researchers recruited 290 males between the ages of 14-40 at a reintegration center and assessed types of traumatic events experienced, PTSD symptom severity, offenses committed, and drug abuse. Through structured interviews and administration of the PTSD Symptom Scale Interview and a checklist adapted from the Children's Exposure to Violence Checklist, Sommer et al. analyzed the data utilizing statistical analyses to determine relationships between variables. In line with previous research findings, there was a positive relationship between number of traumatic events experienced and severity of PTSD symptoms.

Additionally, exposure to traumatic events was positively correlated with drug abuse. Sommer et al. (2017) suggested that the drug use may have alleviated feelings of

guilt and shame, but also was correlated with increased violence, continuing the cycle of violence and substance abuse. The authors noted the ongoing cycle between exposure to violence which can lead to drug use to mitigate the mental impact of the violence, but which then leads to the commission of more violent acts, trapping the combatants in a cycle that is difficult to break unless mental health treatment is obtained. Sommer et al. highlighted the inextricable link between trauma, substance use, and further aggression. The authors noted the limitation of causality not being inferred given the correlational and cross-sectional design. Also, generalizability was limited to the population in the study. However, the results continue to support the research findings that exposure to war conflict and forced soldiering is detrimental to an individual's mental health and without a targeted intervention, likely will not be alleviated (Sommer et al., 2017).

A recent study by Robjant et al. (2020) added to the body of research on the negative effects of exposure to violence as a child soldier and poor mental health outcomes post conflict. Robjant et al. explored the links between the perpetration of violence among female child soldiers and mental health problems and increased aggression post conflict. Violence that is perpetrated in civilian settings post conflict is related in part to mental health complications that result from their conflict experience. PTSD symptoms like hyperarousal can lead to reactive aggression. Untreated experiences of trauma interfere with peacekeeping efforts as the ongoing violence in the community causes destabilization (Robjant et al., 2020).

Robjant et al. (2020) recruited 98 female former child soldiers who had been forcibly recruited into conflict between 2012 and 2014 in the DRC. Ages were between

16-25 years. Assessment measures were administered via a structured clinical interview. A 44-item checklist of traumatic experiences adapted from previous studies in the region was used to assess lifetime exposure to violence, both direct experiences and witnessing it. PTSD symptoms were measured with the PTSD Symptom Scale Interview. Current aggression was measured with a 32-item checklist of aggressive or violent acts within the previous three months.

All the participants reported having been raped or sexually assaulted. High levels of perpetration violence were also reported, with nearly all the women reporting harming others. Clinical symptomology levels were extremely high across all participants. The statistical analysis demonstrated that appetitive aggression and trauma symptoms positively affected current violent behavior. The high levels of these two factors independently predicted the continuation of violence post conflict, an important finding supporting the need for addressing the treatment needs of this population. The study provided important evidence for the use of evidence-based treatments of PTSD that are adapted to the population to aid in peacebuilding efforts in high conflict areas such as the DRC. Robjant et al. (2020) showed that psychological sequalae have a strong impact on individual and social functioning in female former child soldiers and that this only serves to heighten aggression and violence within families and communities post conflict. The findings imply that if PTSD and aggression symptoms can be treated successfully with a targeted intervention, violent behavior post conflict will decrease, increasing the success rate of reintegration for the former soldiers and their communities.

Longitudinal Outcomes on the Mental Health Impact of War. A groundbreaking, longitudinal study examined the mental health effects of war exposure for child soldiers long-term. Betancourt et al. (2010) conducted a cross-sectional analysis of data collected in 2004 as part of a longitudinal study on outcomes for former child soldiers in Sierra Leone. The sample consisted of 273 reintegrated former child soldiers, both male and female. Interviews were conducted as well as the administration of locally derived and standardized measures.

Specifically, the Hopkins Symptom Checklist SF-25 was used to measure anxiety and depression. This measure is commonly used to assess mental health problems in war-affected populations. Additionally, other constructs such as hostility, confidence, and prosocial attitudes were assessed. Results indicated that female participants had significantly higher scores of depression and anxiety, all within a clinical range. Females showed higher levels of hostility symptoms and significantly lower levels of confidence and prosocial attitudes. Committing acts of violence against others was strongly associated with severe depression and anxiety for both genders. The results also indicated that the stigma of being a child soldier impacted the participants' ability to return to school and reestablish social connections in their community, continuing the cycle of anxiety and depression (Betancourt et al., 2010).

Betancourt et al. (2010) also showed hopeful results related to the resiliency of former child soldiers. When the participants were able to attend school and their reintegration was assisted by local social services, there was a significant difference in psychosocial adjustment as evidenced by reported increased confidence and prosocial

attitudes. Although the authors noted the limitation of the clinical measurements not being validated for the culture or setting, important conclusions about the mental health effects of war can be drawn from their results and used to inform ongoing research. As reintegration is a complex process, providing psychosocial support, mental health interventions, and opportunities for education and access to social supports emerged as critical pieces of the healing process for the participants. Finally, Betancourt et al. urged future research to focus on raising awareness of sustainable responses that support the mental health of former child soldiers returning home. This study adds to the body of literature that demonstrates the profound effect forced recruitment in armed conflict has on someone's mental health and that without interventions, mental health will not improve on its own (Betancourt et al., 2010**)**.

Betancourt et al. (2020) followed up their initial longitudinal study (Betancourt et al., 2010) with their findings on mental health outcomes for former child soldiers over time when they reassessed participants in 2017. They sought to investigate the associations between participation in armed conflict and mental health outcomes post conflict. The prospective study followed a cohort of male and female former child soldiers from 2002-2017 who were involved in Sierra Leone's civil war. The researchers reassessed 323 of the original 491 participants regarding family and community support, anxiety and depression symptoms, and PTSD symptoms. The Child War Trauma Questionnaire established individual war experiences. Mental health was assessed using the Oxford Measure of Psychosocial Adjustment and the Hopkins Symptoms Checklist. At the time of reassessment, the mean age of participants was 28 years. At this time, 47%

of participants exceeded the threshold for anxiety and depression and 28% were above the clinical cutoff for PTSD, even years after the conflict ended.

Betancourt et al. (2020) offers important findings as it is the only one of its kind to have followed a cohort of child soldiers from the end of conflict into adulthood. Important implications for treatment interventions and future studies are noted. For example, war experiences and post conflict risk and protective factors play a role in shaping mental health and life outcomes. In the study, post conflict stressors such as stigma, lack of community and family acceptance, physical abuse, and neglect upon returning home contributed to poorer mental health over time. Conversely, protective factors such acceptance, community sensitization and education, and traditional healing rituals contributed to a positive influence on long-term outcomes for the former child soldiers.

Betancourt et al. (2020) findings align with other studies of former child soldiers, adult war veterans, and studies of adults with adverse childhood experiences. The mental health trajectories of participants in these studies suggested that although some improvement comes with time, anxiety and depression are more intractable into adulthood. However, positive developmental outcomes are possible in adulthood if adequate and culturally sensitive supports are available to monitor and treat underlying mental health conditions (Betancourt et al., 2020).

The data collected over 15 years by Betancourt et al. (2020) has been used by Su et al. (2020) to further study mental health impacts of war-related trauma. Su et al. used the data from Betancourt et al. (2010) longitudinal study to conduct a latent profile

analysis (LPA) of the Sierra Leone former child soldiers and observe patterns between war exposure and mental health outcomes long-term.

The LPA identified two profiles of participants to include high exposure and lower exposure to war-related events. Su et al. (2020) found that significantly higher levels of violence and combat experiences were associated with more PTSD symptoms, increased hyperarousal symptoms, and greater difficultly with emotion regulation across all points of assessment in the longitudinal study. Su et al. concluded that former child soldiers exposed to higher levels of war-related events require more immediate and intensive mental health services post-conflict and into adulthood. Continued findings regarding the deleterious effects of war trauma on mental health can inform policy makers, practitioners, and community organizations on best practices based on the evidence being generated from such studies. The more studies that contribute similar findings, the more the results can be generalized to other populations in other countries for effective interventions.

Impact of War on Mental Health Around the World. Negative mental health effects have been found in studies in other countries where child soldiers are also used in wars. Kizilhan and Noll-Hussong (2018) conducted a qualitative inquiry into the psychological burden on 81 Iraqi child soldiers ages 8-14 that were abducted by the Islamic State in Iraq between 2014 and 2017. The researchers included control groups comprised of children that were not child soldiers. Kizilhan and Noll-Hussong administered established psychometric assessments and conducted a structured psychological interview to assess traumatization and other mental disorders. Compared to

the control groups, the child soldier participants showed a significantly higher prevalence of PTSD, depressive and anxiety disorders, and somatic disturbances.

Kizilhan and Noll-Hussong (2018) described the high rates of psychiatric disturbances present among the former child soldiers as alarming and adding to the evidence that researchers, clinicians, and policy makers have an ethical obligation to attend to the urgent psychosocial needs of this population. Further, Kizilhan and Noll-Hussong emphasized the need for a culturally sensitive approach to treatment that matches the unique cultural beliefs of the population to increase effectiveness. The results also led the researchers to point to the need for post-conflict community-based psychosocial care for countries and regions reintegrating and rehabilitating their citizens.

Kizilhan and Noll-Hussong (2018) noted the limitations of their study to include a small sample size that does not allow for generalization about the prevalence of mental health disorders to other populations of child soldiers. However, the conclusions support evidence in the literature that former child soldiers suffer greatly as they attempt to reenter their communities. Specifically, the rate of PTSD in the current study (48%) was comparable to the rate of PTSD in child soldiers in Rwanda, Uganda, and Sudan, which range from 30 to 67% (Kizilhan & Noll-Hussong, 2018). The results add to the evidence that more research on treatments that are evidence-based and contextualized to the population should be used to advance the efforts of reintegration.

Similar conclusions regarding the psychological consequences of war across cultures and countries were drawn by Weisleder and Rublee (2018) in their review of neuropsychological effects of armed conflicts. Mental health disorders like psychosis,

anxiety, depression, and PTSD are prevalent among populations exposed to or engaged in war conflict. Neuropsychological disorders such as epilepsy and open and closed head injuries are present in 30% of individuals that are victims of war conflict (Weisleder & Rublee, 2018). Mental health conditions can exacerbate the neuropsychological ones and can lead to ostracization, discrimination, and stigmatization due to limited understanding about their causes and treatment.

Weisleder and Rublee (2018) reported that victims exposed to trauma and torture during war are 10 times more likely to develop PTSD that persists years after the conflict has ended. PTSD has shown to be associated with structural and metabolic changes in the brain that can contribute to the onset of neuropsychological disorders as well as permanently alter the personality of the person.

Weisleder and Rublee (2018) acknowledged that the physical injuries of victims of armed conflict have been more widely recognized and treated. However, attention has turned to the psychological injuries that can lead to physical ailments and must be treated the same with interventions that work. Weisleder and Rublee recommended sustainable services that are applicable to the culture and delivered by individuals that understand the ethnic environment where they are being applied. Specifically, the authors noted the research that identifies trauma-focused cognitive therapies as showing the most evidence for positive outcomes for psychological injuries.

Research on the Treatment of Child Soldiers

In the early days after the war in Uganda concluded, Medeiros (2007) attempted to establish mental health care for former child soldiers in Sierra Leone with the help of

the United Nation's Demobilization, Disarmament, Reintegration, and Rehabilitation program that offered former soldiers $200 to surrender their weapons and military IDs. Vocational training and psychosocial interventions were implemented. Medeiros collaborated with the University of Sierra Leone to train local helpers to provide mental health care in the form of individual and group counseling.

Medeiros (2007) recommended several elements for future rehabilitation efforts to include establishing national mental health policies, integrating research into clinical intervention programs to establish what works, developing a theoretical structure for rehabilitation, and training indigenous helpers to reach the enormous needs of the recovery process. Since that time, many programs and interventions, both private and government-funded, have been implemented in various African countries to assist with helping individuals and communities heal following Medeiros' recommendations for rehabilitation for former child soldiers.

The World Health Organization launched the Mental Health Gap Action Programme in 2009 to increase accessibility to evidence-based treatments in these countries (World Health Organization, 2016). In 2013, the World Health Organization added additional guidelines specifically to address stress-related conditions such as PTSD, acute stress, and bereavement. The guidelines were most recently updated in 2016 (World Health Organization, 2016). Kane et al. (2016) aimed to assess perspectives on the feasibility and acceptability of the guidelines in several mental health clinics in Uganda through a qualitative study. The results of Kane et al. highlighted important factors for effectively treating populations traumatized by war conflict.

First, the mental health professionals interviewed for the study agreed that group therapy was a preferred psychological intervention as it promoted peer support, was more culturally appropriate, and sustainable over time. The benefits of group therapy, either alone or in conjunction with individual therapy, were viewed as an important component of intervention.

A second finding was that Western psychological interventions may not be as culturally accepted and therefore less effective. Therefore, the need for culturally adapted interventions is imperative to acceptability. For example, while Eye Movement Desensitization and Reprocessing is an evidence-based treatment for trauma in Western countries, it is viewed suspiciously and even deemed as "witchcraft" by some African cultural groups, thereby impacting its effectiveness as a treatment method for trauma in these regions (Kane et al., 2016). Kane et al. (2016) indicated that adaptation of the World Health Organization's guidelines to fit local contexts and cultures increased the likelihood of success in implementing mental health interventions.

An array of interventions have been uniquely created based on trauma theory research and implemented in group and individual settings in war-torn areas of Africa. Other interventions used and researched in Africa are established therapeutic modalities such as narrative exposure therapy (NET), cognitive behavioral therapy (CBT), and trauma-focused CBT (TF-CBT) that have been observed for their effectiveness with former child soldiers. The literature in this field of study supports the argument for evidence-based, culturally adapted, and cost-effective treatments that can be sustained by

the community in which they are implemented (Betancourt et al., 2020; Robjant et al., 2020).

Narrative Exposure Therapy

NET first emerged in the literature as a treatment used for former child soldiers in a study by Ertl et al. (2011). NET is a short-term intervention that is trauma-focused and can be used in low-resource countries afflicted by crises and war conflict. It can be implemented in group or individual settings and can be facilitated by lay people. NET guides the participant in the telling of their trauma narrative, helping to integrate confusing and fragmented traumatic events into a coherent narrative that honors the participant's experiences and promotes hope for the future. Ertl et al. (2011) reported a significant reduction in PTSD symptoms after participants completed group sessions 12 months post follow up. Ertl et al. concluded that NET is an effective treatment for PTSD in former child soldiers and can be successfully applied in a community setting by lay peer counselors and educators.

In a recent study conducted in 2017 by Hinsberger et al., a variation of NET for offenders, forensic offender rehabilitation (FORNET), was applied in a population of former child soldiers and other offenders living in a rehabilitation setting. Over the course of three weeks, participants engaged in therapy with trained NET therapists that administered the therapy. Therapy sessions included psychoeducation about trauma and PTSD symptoms, followed by reconstruction of the participant's biography. The participant was guided by the therapist to reexperience the traumatic events through retelling and reframing the experience in a way that managed symptoms in the moment

and at a level that was tolerable and safe for the participant. By the end of treatment, the participants learned to attribute new meaning to their experience and create meaning for a different future. The results of the study showed FORNET as an effective and feasible intervention for reducing PTSD symptoms in a context of ongoing exposure to war violence. Hinsberger et al. (2017) experienced high drop-out rates which affected their sample size and effect sizes. Further, generalizability was reduced to the male population of the region where the study took place.

Robjant et al. (2019) applied FORNET to a group of former female child soldiers to determine its effectiveness to reduce PTSD and aggression. They expanded on the earlier studies of NET applied in individual sessions to include group work. Robjant et al. wanted to increase peer support and connection among participants as trauma recovery theory includes reconnection to others and community as part of the healing process. The researchers randomly assigned 92 female participants to the FORNET treatment group or the treatment as usual (TAU) control group. FORNET group members were encouraged to connect with another participant to support one another throughout the process outside of the treatment sessions. FORNET was delivered in six 90–120-minute individual sessions delivered by trained indigenous therapists. Group sessions were conducted once a week for 60-90 minutes. The TAU group received services through a social services agency that included occupation training, basic counseling, and practical support.

Statistical analyses showed group differences on clinical outcomes. For example, at baseline 100% of cases met criteria for PTSD (Robjant et al., 2019). At a 9-month follow up, 86% of the TAU group met criteria compared to 35% in the FORNET group.

The researchers concluded that participants who received FORNET with the expanded groups component benefited from reduced PTSD symptoms, appetitive aggression, and depression compared to the control group. Importantly, women in the FORNET group did not experience any clinical deterioration in symptom severity. However, some women in the control group did experience a deterioration in symptoms, highlighting the criticalness of providing an adequate psychotherapeutic intervention to a highly traumatized population.

The outcomes of this study further support the use of adapted versions of NET in low-income, high-conflict areas to positively impact the debilitating mental health effects of war (Robjant et al., 2019). Additionally, the feasibility to deliver the treatment in a complex and unstable environment shows promise for FORNET as a viable treatment option for former child soldiers. Robjant et al. (2019) noted the need for interventions that specifically target PTSD symptoms and aggression in post conflict regions to reduce the ongoing cycle of violence in these communities.

The most recent study on FORNET was conducted by Koebach et al. (2021) and the treatment modality further observed for its effectiveness in a population of former child soldiers in eastern DRC. Koebach et al. expanded upon Robjant et al. (2019) by revising the group treatment component to include enhanced skill building to target violent behavior in a sample of 448 male former child and adult combatants in war-torn regions of the DRC.

Using a design similar to Robjant et al. (2019), Koebach et al. (2021) compared a FORNET treatment group to a TAU control group. Participants were recruited through a

local social services agency that provided services for former soldiers. Assessments included structured clinical interviews and clinical scales to measure PTSD symptoms and levels of aggression. Assessments were given at the commencement of treatment and between 3-5- and 6-9-month intervals. FORNET was delivered in six weekly individual sessions and weekly group sessions with slightly different group components than Robjant et al. For example, the therapists were encouraged to decrease their involvement in facilitating the group and allow the participants more autonomy to lead once the protocol was established and group member confidence in the process was increased. The TAU group received basic services through the social services agency that included job training, problem-solving, empathic listening, as well as participation in sports activities and peer support.

The results of the statistical analyses conducted by Koebach et al. (2021) showed a significant effect of treatment over time for all clinical outcomes measured (PTSD, depression, aggression, social) as compared to the control group. The treatment group perpetrated on average two fewer acts of severe violence than the TAU group within three months of treatment. An important finding regarding the enhanced group component related to the promotion of social bonds within the group to further reduce the impulse to engage in violence outside the group. The peer support and accountability encouraged in the group setting impacted the continued treatment effects outside of group. Koebach et al. concluded, in alignment with previous research on FORNET (Robjant et al., 2019), that it is an effective therapeutic method that improves a variety of mental health conditions and social outcomes for former child soldiers. The results imply

that effective and strategic interventions grounded in theory and research can restore mental health and support rehabilitation and reintegration efforts in unstable areas of the world.

Cognitive-Behavioral Interventions

Cognitive behavioral therapy (CBT) is considered the gold standard of evidence-based treatment for mental disorders such as anxiety, depression, obsessive-compulsive disorder, and phobias (McMullen et al., 2013). CBT combines a cognitive component (changing thinking) with a behavioral component (doing things differently). Trauma-focused CBT (TF-CBT) adds an emphasis on exposure to a traumatic event and through the retelling of a trauma narrative, the person can integrate their trauma into their current life situation and alleviate the symptoms associated with it. TF-CBT is the treatment of choice for children and young people exposed to traumatic events (McMullen et al., 2013). TF-CBT includes psychoeducation, stress management/relaxation, affect modulation, cognitive coping and processing, creating a trauma narrative, and identifying future hopes.

The most current study on using TF-CBT with the former child soldier population was published by McMullen et al. in 2013. In a controlled trial of 50 male former child soldiers, ages 13-17, a group-based, culturally adapted TF-CBT intervention was delivered to the treatment group over 15 weeks. The participants completed assessments interviews at the beginning of treatment, postintervention, and at a three-month follow up. The control group was on a wait list for treatment. Results showed promising outcomes for affecting distressing symptoms, specifically significant reductions in PTSD

symptoms, depression, anxiety, conduct problems, and an increase in prosocial behavior (McMullen et al., 2013). Treatment gains were shown to be maintained at the follow up assessment.

McMullen et al. (2013) highlighted several factors that may have contributed to the significant success of the intervention. First, local leaders were trained to administer TF-CBT to maximize cultural appropriateness. Next, culturally relevant stories and metaphors were used to explain concepts and give examples in the participants' culture to ensure understanding. Also, the group aspect of the intervention appeared to promote more understanding, normalize symptoms, foster friendships, and provide a measure of emotional support and safety. Lastly, basic needs of the participants were met through providing meals and organized activities outside of group sessions to promote safety and belonging. McMullen et al. noted the small sample size as being a limitation and called for further controlled studies to compare TF-CBT with other mental health interventions in postwar communities to determine effectiveness in other populations and regions.

Morina et al. (2017) conducted a meta-analysis of 21 studies where CBT was used as a mental health intervention for young survivors of mass violence in low-and middle-income countries. Across all the studies, small to medium effect sizes were found when comparing active treatment groups to wait-list groups and their associated levels of trauma symptoms pre- and post-treatment and at follow up. Morina et al. adds to the body of literature that shows efficacious psychological treatments can positively impact PTSD and other symptoms related to war trauma.

More recently, Purgato et al. (2018) reviewed a variety of psychological interventions applied in settings affected by humanitarian crises, including war. They compared the effectiveness and acceptability of certain therapies versus control conditions aimed at treating mental disorders like PTSD, depression, and anxiety in low- to middle-income countries. CBT was reviewed in 27 studies. CBT was shown to be more effective than other therapies.

Purgato et al. (2018) discovered, and like other research on therapeutic outcomes, that PTSD symptoms decreased substantially among participants that received a CBT-oriented therapeutic intervention as compared to groups that received TAU, no treatment, or were on a wait list. Beneficial outcomes were observed immediately after treatment and as long as six months later. An important implication from the results was the need to improve understanding of how the benefits of psychological interventions can be maintained over time for these vulnerable populations. Further, careful attention should be paid to the cultural applicability of an intervention to increase its long term effects. Application of treatments with known efficacy can improve the overall functioning and well-being of individuals, as well as improve economic productivity in armed conflict areas (Purgato et al., 2018).

Models Based on Trauma Theory

An early intervention model implemented by the Center for Victims of Torture in Guinea sought to meet mental health needs and prepare refugees to return home after war (Stepakoff et al., 2006). A psychosocial program was developed with three main goals that included providing mental health care, training local counselors, and raising

community awareness about the link between war trauma and mental health. The treatment model blended Western and indigenous elements of healing. The core components of treatment were based on Herman's (1992) stages of recovery (safety, mourning, and reconnecting) and adapted to the realities of the refugee camp setting.

Local leaders were trained to administer assessments before and after the counseling intervention as well as lead the group sessions. Participants were placed into groups based on age, gender, and commonality of trauma experiences. The groups met for 10 weeks for two hours per session. Participants were taught to develop safe and caring relationships with others in the group while being educated about war trauma and symptoms. The local group leaders that also resided in the refugee camp modeled sharing of their trauma narrative while teaching and encouraging the use of coping skills. Deriving from the culture, groups were taught skills and concepts through dance, skits, and storytelling.

Measures of psychological symptoms, social support, and daily functioning were assessed at 1, 3, 6, and 12 months after intake. Statistical analyses of the data consistently showed significant reductions in trauma symptoms and increases in social supports during and after the group therapy intervention. Stepakoff et al. (2006) emphasized the importance of their findings for utilizing trauma interventions that are culturally adapted and are aligned with trauma theory research to make a difference for those who have been traumatized at very high levels. Additionally, using indigenous leaders to facilitate and aid with the healing process creates safety and sustainability in a community, even a refugee camp setting where there is little stability and limited resources.

Companion Recovery Model. Gregory and Embrey (2009) evaluated the Companion Recovery Model in its ability to decrease the effects of profound catastrophic war trauma in Liberia, West Africa. The researchers used the Clinical Assessment of PTSD Scale to measure pre-and posttreatment symptoms of PTSD. Participants included a total of 130 females and males, ages 16-26 that had served in some capacity in the war and were coerced into service. The research team selected participants with the highest assessment scores to determine if those with profound trauma could benefit from a trauma healing model. The participants took part in a two-week training with the Companion Recovery model which included nine modules ranging in topics from "Overwhelming Events," to "Recognition, Release, and Rebuilding." Each module builds upon the previous and participants were taught how to verbalize their traumatic narrative, learn about physical symptoms associated with trauma, and finally, created a new self-image based on empowerment and reintegrating back into their communities in meaningful ways.

Based on results from a two-tailed *t* test, Gregory and Embrey (2009) noted a significant decrease in PTSD symptoms on the posttest. One year later, a reassessment was administered to subjects that were available for follow-up and PTSD symptoms were 12% below their previous posttest, even without professional intervention over the year. Gregory and Embrey concluded that using a model based on trauma research and practice was significant to the participant's healing. Gregory and Embrey recommended that international trauma reduction models should be grounded in trauma recovery theory and tailored to the culture where the intervention is implemented. Additionally, and in

alignment with previous research discussed, models being used should be sustainable and able to foster replication by incorporating indigenous trainers and resources. Lastly, Gregory and Embrey encouraged an evaluation process to measure outcomes.

Gregory and Embrey (2009) demonstrated early on what current studies continue to recommend about trauma treatment for former child soldiers around the world; interventions need to be based on trauma research and theory, include reintegration efforts, use indigenous people to promote sustainability, and presented in a culturally sensitive and adapted manner. The results demonstrated that there is hope for recovery and reduction in distressing symptoms from even the most devastating trauma with strategic intervention.

Youth Readiness Intervention. Another model that was created based on trauma theory research for use among war-affected youth was the Youth Readiness Intervention (YRI); a novel, group-based mental intervention designed to reduce functional impairment associated with the psychological distress of war conflict (McBain et al., 2016). Functional impairment relates to aspects of daily living such as self-care, communication, and involvement in the community. Depression, anger, and hostility that leads to emotional dysregulation and poor interpersonal skills can affect these important aspects of functioning for this population. The purpose of this study was to evaluate the YRI for its costs and cost-effectiveness to successfully treat former child soldiers ages 15-24 in Sierra Leone. In the randomized controlled trial, 436 participants were assigned to the treatment group or the control group that received TAU.

YRI uses empirically supported practice components that have efficacy across disorders ranging from depression to conduct disorders. Group sessions over a 10-week period were taught by local trained facilitators and covered skills derived from cognitive behavioral therapy such as emotion regulation, cognitive restructuring, problem-solving, and interpersonal skills (McBain et al., 2016). The TAU group was served by local social service agencies or religious programs serving troubled youth. Baseline assessments were given pre-treatment and post-treatment, as well as at 6- and 8-month intervals. Results showed that YRI participants reported lower levels of functional impairment in their daily living compared with the control group. Further, adaptive behavior and emotional regulation was significantly higher than the control group. At the 6-month follow-up, participants in YRI continued to report higher levels of emotion regulation and overall greater levels of functioning.

McBain et al. (2016) were able to report that YRI is an effective treatment for former child soldiers with an array of benefits that included improved school retention and performance in addition to other daily living functioning and mental health outcomes in the short-term. McBain et al. were not able to establish it as a cost-effective treatment in its form at the time of the study. McBain et al. assumed that treatment effectiveness would decrease over time, affecting cost-effectiveness in the long-term. However, the results continued to support previous research that shows evidence-based treatments, adapted to the population, show initial positive outcomes for the treatment of former child soldiers as compared to control groups that do not receive a strategic intervention.

Complex Care Approach. Berthold et al. (2020) conducted a recent case study utilizing a fictional torture survivor based on real-life experiences of multiple former child soldiers examined the use of the Complex Care Approach (CCA) that draws from the Harvard Program in Refugee Trauma's five-domain model of trauma recovery and is an adaptation of the Complex Care Model (CCM). Domains include the trauma story, bio-medical, psychological, social, and spiritual. The CCM has been shown to be effective in contexts that are rich in resources. Since most African countries lack access to primary care, psychological, and social services, an adaption was needed that could address complex trauma in resource-poor regions, thus the development of CCA.

The CCM model is bio-medical in nature so four domains related to trauma were added to compliment the biomedical domain. Further, a key emphasis of the CCA approach is that care across domains is integrated and a team effort to collaboratively work on behalf of the torture survivor is paramount. Additionally, the model supports the survivor being fully engaged and participatory, driving treatment decisions to foster empowerment and decrease helplessness.

Adhering to Herman's (2015) stages of trauma recovery, the CCA seeks to establish safety as well as addressing survivor-identified concerns first. Next, the social domain is addressed, identifying and building upon existing social supports. After stabilization and support is established, a detailed trauma history is taken to assess the impact of trauma across the five domains of the participant's life. This includes assessments to measure symptom severity.

Cultural considerations and adaptations are made throughout the process to ensure optimal effectiveness of all interventions. The biomedical domain addresses any physical and medical issues the participant is experiencing. The psychological domain addresses the mental health diagnoses relevant to the functioning of the participant and subsequent treatment efforts are made, such as individual therapy, psychopharmacology, or psychiatric hospitalization in extreme cases.

Skill building and symptom management are part of this domain as well, replacing ineffective or harmful coping mechanisms that were adaptive during their life as a soldier, but not as a civilian. In the spiritual domain, the role of spiritualty is explored as it relates to the participant's belief system or cultural practices. Traditional cleansing or healing rituals have been found to be helpful for some populations of former child soldiers (Berthold et al., 2020). The authors created the fictional case study to demonstrate how treatment would look in each domain based on the participant's unique experience and needs, as well as providing an example of how multiple members of a care team would interact to provide integrated care.

Berthold et al. (2020) purported through their case study that survivors of complex trauma require holistic and integrated care using a model like CCA. They hypothesized that with holistic complex care, other survivors similar to the subject of the case study would experience significant relief and regain a positive quality of life. The authors maintained that even in a resource-poor area where a multidisciplinary team is not accessible, a clinician could establish the diagnosis and determine the treatment implication of each domain and set priorities based on available resources.

A key limitation of this model is the requirement of a trained clinician that has specialized knowledge to diagnose and treat mental health disorders. Effective, ongoing treatment is dictated by the resources available in the area where the participant resides. The ideal implementation of this model requires a team of professionals collaborating and providing care, which may not be available in war-torn areas where the most traumatized populations reside. Lastly, the researchers noted that outcome data using the CCA has not been collected or analyzed. However, important implications for the treatment of former child soldiers determined in this study continue to be supported by previous research and includes the cultural adaptation of any interventions and adhering to evidence-based principles of trauma recovery research (Berthold et al., 2020).

Scripture-Based Trauma Healing Model. Trauma research has shown that incorporating one's faith or elements of spirituality can be a mitigating factor in healing from trauma (Herman, 2015; Johnson et al., 2021). Religious coping or relying on one's faith to make meaning from a traumatic event can result in increased levels of comfort and decreased depressive symptoms (Schultz et al., 2016). In response to the continued spread of global trauma, the Trauma Healing Institute at the American Bible Society developed a short-term, Scripture-based trauma healing model for adults in Africa in 2001. Schultz et al. (2016) described the unique approach to trauma healing as blending mental health practices and engagement with God. After the model was field tested in 2002 by church leaders from 10 different ethnic groups in Nairobi, the first published edition of the curriculum came out in 2004.

The model uses a workbook, Healing the Wounds of Trauma. The workbook focuses on theological topics, addressing questions such as if God loves us, why do we suffer?; Bringing pain to the cross of Jesus Christ; What happens when someone is grieving?; and How can we forgive others? Through a participatory and experiential model of learning, facilitators teach on the topics and then invite small group discussion and exercises, assisting participants in processing their thoughts and emotions. Participants are educated about grief and express their personal narratives while receiving peer support.

In 2014, the first empirical study on the Scripture-based healing model was conducted and Schultz et al. (2016) sought to answer the question of whether the intervention would lead to a reduction in trauma symptoms and an increase in spiritual well-being. The sample included 23 adult participants located in Nicaragua that were participating in a pilot group that used the Healing the Wounds of Trauma workbook. Data was collected using the PTSD Checklist, the Trauma History Questionnaire, and the Spiritual Well-Being Scale administered at pre-treatment, one-week post-treatment, and at a six-month follow-up. Results demonstrated a significant decrease in PTSD symptoms and an increase in spiritual well-being between the pre-test and six-month follow-up. There was not a significant difference in scores between the one-week and six-month assessments. Schultz et al. noted, however, that participants in this group experienced an earthquake and housing losses after the one-week assessment and before the 6-month assessment, possibly affecting the outcomes. This may be attributed to additional traumas faced or limitations with the model, which further research is needed to deduce.

Additional limitations of the study included the small sample size, use of a convenience sample, and reliance on self-report measures. Schultz et al. (2016) encouraged further studies that utilize control groups and participants that do not identify with a specific religion to observe the outcomes of a spiritual well-being focus with diverse populations. Schultz et al. concluded their study with the assertion that there is a need for efficacious, faith-based models of trauma healing that are culturally and trauma-informed to impact underserved communities globally.

A recent empirical study on the use of the Scripture-based healing model used in a correctional setting was published in 2021 (Johnson et al., 2021). In 2017, the Trauma Healing Institute partnered with a prison ministry to conduct a longitudinal study of their Correctional Trauma Healing Program in a jail setting. The Healing the Wounded Heart workbook was used as part of the curriculum adapted for the correctional setting. The sample include 349 inmates at a jail in the United States. The treatment group consisted of 210 participants and the control group was comprised of 139 participants. The inmates were administered a survey created for the study that assessed negative mental health consequences of trauma, outcomes that the program was designed to promote (forgiveness, compassion, resilience, and religiosity), or reduce (vengefulness and blaming God). Johnson et al. sought to determine if those in the treatment group had better mental health outcomes than those in the control group as a result of participating in the program. Four assessments were administered to the treatment group: a pretest, a posttest immediately following the group, and two follow-ups at 1 and 3 months after the

program. The control group was assessed using only the pre and posttest with a 2-week interval between assessments.

Johnson et al. (2021) found significant differences between groups on outcome measures, especially lowered symptoms of PTSD and increased prosocial attitudes and behaviors like forgiveness, a sense of meaning in life, and positive beliefs about spirituality. A secondary outcome reported in the results involved the treatment group perceiving higher levels of social and familial support post-intervention, as compared to the treatment group.

Additionally, the researchers found that PTSD symptoms remained at the lower level one- and three-months post-treatment and were statistically significant. Effect sizes were found to be large on all four measures of PTSD, affirming that the curriculum was effective for decreasing negative consequences of trauma in this population, even three months later. Johnson et al. (2021) concluded through their randomized controlled study that the curriculum was found to be effective in reducing trauma symptoms and increasing spiritual well-being. Johnson et al. added to the literature on the effectiveness of the Scripture-based healing model to lower PTSD symptoms in a specialized population.

Mending the Soul Model. In 2005, a non-profit organization, Mending the Soul Ministries (MTS), developed a community-based trauma curriculum that could be administered by lay people and that integrated scientific and social science research, as well as faith components, to address trauma and abuse. Like the Scripture-based healing model, MTS has a theological component and touches on the subject of forgiveness. A

distinct difference, however, is the grounding of the MTS model in trauma theory. The MTS model was based on Herman's (1992) stages of trauma healing. Like the Scripture-based model, MTS incorporated artistic elements and experiential exercises in a workbook format designed to be used in group settings. Crowl (2012) conducted the only study to date on the effectiveness of the MTS model to reduce trauma symptoms in participants.

In their program evaluation of the MTS curriculum, Crowl (2012) surveyed 18 female participants between the ages of 19 to 61 years that were taking part in pilot groups in the United States and Mexico. Participants were administered the Trauma Symptom Inventory (TSI) pre and postgroup, and the Outcome Rating Scale (ORS) after each weekly group session. The TSI was designed to assess acute and chronic PTSD symptoms, including the effects of multiple types of trauma. The ORS was designed to assess current level of distress or comfort on four scales; individual, interpersonal, social, and overall. Results of the statistical analyses showed a significant difference in participant's reported symptoms after the intervention, as measured by the TSI, as well as increased general comfort in functioning, as measured by the ORS. Significant differences were found on four of the 10 clinical scales of the TSI, specifically in lowered defensive avoidance, dissociation, sexual concerns, and impaired self-reference.

Crowl (2012) concluded that participants experienced positive changes from engaging in the exercises in the workbook as well as being a part of a group although it was not clear whether the curriculum or group time alone would have proven beneficial

in reducing symptoms, but nonetheless, the combination of the two variables yielded a significant reduction in trauma symptoms.

Limitations to Crowl's (2012) study included the small sample size, which limited the generalizability of the results to the population of the groups. Also, contrary to previous studies observing longer-term treatment effects at later intervals, no follow up measures were administered post-intervention, limiting the effects to immediately after the group concluded. Additionally, participant differences were not controlled. The study did not differentiate between types of trauma experienced, meaning some participants could have been affected by one episode of abuse while others suffered from years of complex trauma, affecting outcome scores. Crowl urged more rigorous studies with larger sample sizes to observe the effectiveness of this unique model to impact trauma symptoms for culturally diverse populations.

To positively impact the effects of trauma across more diverse populations, Tracy and Tracy (2019) adapted the MTS curriculum specifically for war-torn areas of Africa beginning in 2007. Compared to other models of trauma care that are developed from Western medical models and applied to other cultures, the treatment program, BHW, was derived specifically from the African culture, integrating the voices of African survivors, social-science research, and a theology of suffering, healing, and forgiveness (Tracy & Tracy, 2019). The curriculum follows Herman's (1992) three stages of trauma recovery to include establishing safety by educating participants on the effects of trauma, facilitating mourning and retelling of the trauma narrative through a unique story-telling

template, and finally, reconnection to community and self in a way that reflects the African process of reintegration through forgiveness and spiritual cleansing.

The curriculum uses expressive art and contemplative meditations that encourage song, dance, poetry, and storytelling, which are important elements of the African culture. The curriculum was designed as a community-based model for indigenous leaders and lay people to use to increase sustainability and remain a cost-effective trauma intervention for communities affected by trauma.

The BHW treatment program has not been formally assessed for its effectiveness to impact trauma symptoms and is being implemented in group settings in mental health care facilities, school, and church settings in regions in eastern Africa. Mending the Soul Ministries partnered with these agencies to collect data through the administration of the TSC-40 pre- and postintervention. The TSC-40 is a validated and reliable measure of complex PTSD symptoms (Briere, 1996). Through the statistical analysis of pre-and post-scores for participants that have completed the BHW treatment program in a therapeutic group setting, differences in reported PTSD symptoms may be observed and conclusions made about the use of the curriculum to impact PTSD symptoms in former child soldiers. While there are psychological interventions being used similarly, BHW is unique in that it combines psychological and spiritual components grounded in trauma research and adapted specifically for the culture it is being used but without the empirical research to validate its efficacy.

Summary and Conclusions

The consensus among researchers in the study of former child soldiers is that the mental health impact of forced military participation is detrimental to individuals, families, and communities (Bauer et al., 2018; Betancourt et al., 2020; Denov & Lakor, 2018; Garbarino et al., 2020; Robjant et al., 2019). The impact of being forced to commit war atrocities against neighbors and family cannot be ignored by the health care system or communities that are trying to rebuild postconflict.

The research is clear that PTSD and other mental health illnesses brought on by war trauma do not go away without intervention (Betancourt et al., 2020). Past and current research outcomes demonstrate the need for targeted, evidence-based treatment that is adapted to the culture in which it is being applied. Across studies where random controlled trials were applied, results consistently showed that groups and individuals who received treatment had lower rates of mental health symptoms than those who did not receive treatment. The review of the literature showed promising outcomes for former child soldiers who did receive some form of mental health aftercare upon returning to their community.

Additionally, all the studies reviewed urged further research to identify evidence-based, culturally appropriate forms of treatment to positively impact the plight of this vulnerable population. The present study filled a gap in the literature by examining the effectiveness of BHW, a theologically based, culturally derived, research-driven treatment program to impact the PTSD symptoms of former child soldiers in Africa that has not been previously studied.

In Chapter 3, detailed information about the research design and rationale for the study to fill a gap in the literature is presented, as well as the research methodology, population, and sampling strategy. Information pertaining to how the archival data was obtained, as well as ethical procedures for the study are outlined.

Chapter 3: Research Method

The aim of this quantitative, quasi-experimental archival study was to investigate the effectiveness of the BHW (Tracy & Tracy, 2019) treatment program in reducing trauma symptoms for adult former child soldiers who participated in a trauma recovery group in Uganda and the DRC in 2021. Although more research has been conducted in the last several years on trauma treatments that are effective in reducing mental health symptoms for former child soldiers, more research on effective treatments for PTSD are needed. There were no current studies on the BHW treatment program that integrates theological, psychological, and trauma theory, and is designed for the culture in which it is being implemented. Chapter 3 consists of the research design and rationale and the methodology, including the population, sampling procedures, recruitment, data collection strategies, and instrument used. Chapter 3 also addresses threats to validity.

Research Design and Rationale

To examine whether BHW (Tracy & Tracy, 2019) was effective in reducing PTSD symptoms for former child soldiers, the following research question was used:

RQ: Is the BHW treatment program effective at reducing trauma symptoms for former child soldiers?

H_o: The BHW treatment program does not reduce pretreatment trauma symptoms as measured by the TSC-40.

H_1: The BHW treatment program does reduce pretreatment trauma symptoms as measured by the TSC-40.

A quantitative, quasi-experimental archival design was employed to examine within-group differences among adult former child soldiers participating in treatment groups. Comparisons of means were made between pre- and postadministrations of the TSC-40 given to preexisting dependent groups without manipulation of variables or random assignment. A paired sample *t* test was the statistical test used to compare the two population means. This type of research design was appropriate for several reasons. First, the use of archival data from earlier in the year enabled the use of data collected recently to answer the research question. Second, the use of archival data permitted comparisons of means within groups using a validated measure designed to measure symptoms of PTSD (see Frankfort-Nachmias et al., 2015). Third, the use of secondary data reduced the ethical issues associated with conducting research on a vulnerable population that is difficult to access due to language and geographical limitations (see Creswell & Creswell, 2018). Lastly, the use of secondary data allowed for replication of the study (see Frankfort-Nachmias et al., 2015). Using archival data in a quasi-experimental design allowed me to study the sample population of interest and to generalize and make assumptions about the effectiveness of the BHW treatment program to reduce trauma symptoms for former child soldiers. Permission from Walden University's Institutional Review Board (12-15-21-0986658) was granted to collect the archival data.

Methodology

Population

The population sampled was adult male and female former child soldiers who participated in BHW treatment groups from May to August 2021 at 24 sites in cities in

northern Uganda and eastern Congo. During this time, 194 participants participated in groups across the 24 sites. From this sample, data pertaining to former child soldiers were collected and analyzed.

Sampling and Sampling Procedures

Mending the Soul Ministries partners with African leaders in church and nonprofit settings in Uganda and the DRC to disseminate and facilitate the BHW treatment program once the leaders have been trained. Mending the Soul Ministries provides funds for the training of the facilitators and workbooks for participants. Small groups are formed based on need in the community and last between 12 and 20 weeks. Groups range in number between four and 12 participants. Inclusion criteria for participating in a group includes having undergone some form of trauma and a basic ability to read and write, as well as a willingness to participate. Facilitators gather demographic information from the participants, such as name, age, race, ethnicity, occupation, and address. Facilitators also interview the participant to understand how and when they experienced trauma and to determine their availability to participate in a group.

Due to the global pandemic and governmental lockdowns in Africa throughout 2020, BHW groups who had been meeting were not able to finish and data were not collected at that time. In April 2021, upon the countries reopening, Mending the Soul Ministries facilitated a conference for local facilitators from Uganda and the DRC in Uganda. Workbooks translated into French and Swahili were disseminated to these leaders for them to start more groups at their agencies and churches.

For the current study, archival data were collected from groups that were facilitated at 24 sites in cities in the DRC and Uganda. At the commencement of the groups in May 2021, 194 people started participating across the sites. Archival data from the most recent groups were collected. The groups began in May 2021 and concluded in August 2021. The sampling strategy that was used was nonprobability convenience sampling because archival data were used. The sample being used was not random and already existed as the BHW groups that were previously formed.

Some of the participating agencies serve a higher population of former child soldiers and their groups were composed mostly of this population. Other groups have a mix of those who were affected by war and abuse, but who did not serve in a soldiering capacity. Therefore, records from the 194 participants were reviewed to select only those who identified as former child soldiers within the groups for the purpose of the current study. The assessments included basic demographic information that included occupation and denoted whether the participant had been a soldier.

Mending the Soul Ministries employs a Congolese interpreter who resides in the DRC and oversees facilitators throughout the DRC and Uganda. Their role is to translate material, gather the data, and support facilitators in gaining the materials necessary to successfully run groups. This person is the main source of communication between all of the participating agencies and Mending the Soul Ministries. As each participating agency completed their BHW groups, the assessments were collected by the Congolese interpreter and given to the African director of Mending the Soul Ministries in Uganda. From the Mending the Soul Ministries office in Uganda, paperwork was scanned and

emailed to the U.S. office as requested or given to visiting U.S. team members to return with.

Sample Size

As the type of sample used in a study can increase or decrease error, the size of the sample is also important (Frankfort-Nachmias et al., 2015). With a more robust sample size the margin of error is decreased, thereby increasing the generalizability of the study (Frankfort-Nachmias et al., 2015). The power of the sample size can help reduce statistical errors. Power is the probability of appropriately rejecting the null hypothesis (Frankfort-Nachmias et al., 2015). Sample size is considered an important factor in determining power. Power for the current study was set at 80%, meaning a statistical difference was missed 20% of the time. Using an analysis program for statistical tests, an a priori G* power estimation was conducted to determine the sample size necessary to detect statistically significant effects for this study (see Faul et al., 2009). With a medium effect size of .5, a probability level of .05, a power level of .08, and 2 *df* on a two-tailed paired sample *t* test, the sample size required to detect statistically significant effects was 34 for the current study (see Faul et al., 2009).

Data Collection Methods

Data Collection

There were 194 participants between May and August 2021 who started in BHW treatment groups throughout cities in Uganda and the DRC. The records were reviewed to select only the assessments for those identified as former child soldiers and only those who completed the groups. Permission was requested and granted from Mending the Soul

Ministries to obtain and analyze the pre- and post-TSC-40 assessments of former child soldiers from the most recent treatment groups that ran from May to August 2021 at 24 sites. Once permission was granted by Mending the Soul Ministries to use the assessments, an electronic letter detailing the purpose of the study and a request for copies of the assessments pertaining to former child soldiers was sent to each of the 24 sites through the Congolese interpreter.

First and last names were not on the assessments to protect privacy and confidentiality of the participants. Initials were used to identify the pre- and postassessments. To further protect the privacy of participants for this study, I redacted initials and labeled assessments with a unique number that matched their pre- and postassessment for pairing the data. Additionally, age, race/ethnicity, gender, location, and occupational information was collected on the assessments.

Instrumentation

The TSC-40 is a 40-item self-report measure of symptomatic distress in adults resulting from childhood or adult traumatic experiences. Developed by Briere and Runtz (1989), the TSC-40 is a revision of the TSC-33. The TSC-40 measures aspects of post-traumatic stress but does not measure all 17 criteria of PTSD as listed in the Diagnostic and Statistical Manual 5th edition (American Psychological Association, 2017). The scale yields six subscale scores as well as an overall score: anxiety, depression, dissociation, sexual abuse trauma, sexual problems, and sleep disturbance (Briere, 1996). The subscales reflect the criteria used in the Diagnostic and Statistical Manual 5th edition (American Psychological Association, 2017) to establish a PTSD diagnosis.

Symptom items are rated according to frequency of occurrence over the prior 2 months, using a 4-point scale ranging from 0 (*never*) to 3 (*often*). The TSC-40 has been found to be a relatively reliable measure in other studies (Briere, 1996). For example, subscale alphas have ranged from .66 to .77, with alphas for the full scale averaging between .89 and .91. The TSC-40 has predictive validity with a variety of traumatic experiences (Briere, 1996; Zlotnick et al., 1996).

The internal consistency alpha for the complete checklist is .90, a reasonable reliability overall, with a mean internal consistency for the subscales of .71 (Elliott & Briere, 1992; Elliott & Guy, 1993; Neal & Nagle, 2013; Norris & Hamblen, 1997). To administer the TSC-40, only the assessment and writing utensils are needed. It takes approximately 10–15 minutes to complete, and 5–10 minutes to score (Briere, 1996).

Zlotnick et al. (1996) further established the criterion validity of the TSC-40 and its subscales to measure PTSD symptoms related to sexual abuse. Rizeq et al. (2020) provided support for using the TSC-40 to measure trauma symptoms across groups who have been exposed to different and multiple types of trauma. Rizeq et al. examined the underlying structures of the TSC-40 to justify use of subscale scores and a total score. Their study provided further and recent construct validity for the use of the TSC-40 to capture complex trauma symptomology. Rizeq et al. results added empirical support for the strong psychometric properties of the measure. The TSC-40 is a research tool and does not require permission to use (Briere, 1996).

Data and Statistical Analysis

The research question addressed whether the BHW treatment program is effective in reducing PTSD symptoms in former child soldiers. Data analysis was conducted through Statistical Package for the Social Sciences (SPSS) using a paired sample *t* test. The goal of a paired sample *t* test is to compare a variable before and after an intervention in closely matched samples (Frankfort-Nachmias et al., 2015). In the current study, the groups consisted of the same participants before and after the intervention. The groups' overall score, plus their scores on each individual subscale on the TSC-40, was compared pre- and postintervention. The scores on the Likert scale are categorical in nature and ordinal-level variables. There were seven dependent variables in this study. Six included the subscales on the TSC-40: anxiety, depression, dissociation, sexual abuse trauma, sexual problems, and sleep disturbance. The seventh dependent variable was the overall TSC-40 score. The independent variable was the BHW treatment program.

The subscales were important to measure separately because someone's overall score on the TSC-40 may not have been an accurate reflection of their symptomology. For example, a participant may have scored below the clinical range on their overall score, not indicating severe PTSD, but may have had a high subscale score for depression. The participant may not have endorsed any of the questions related to sexual trauma or sleep disturbances, therefore keeping their overall score low, but were still being impacted by one symptom of PTSD. Comparison among the subscales using a paired sample *t* test yielded differences in effects of the program on different PTSD symptoms.

Further, analyzing differences in scores between site locations yielded information about which groups had significant differences in scores compared to other sites. Assumptions were made about the effectiveness of the program for various reasons due to these significant differences. For example, different styles of facilitation, group size, or language barriers at the sites may have been what affected the outcomes.

The most appropriate statistical test to compare scores between the sites was a one-way analysis of variance (ANOVA). To conduct a one-way ANOVA with the data, I categorized the 24 sites into four geographical regions to achieve a more even distribution of scores because one group had 12 participants and another group had 23. The one-way ANOVA determined a difference in pretest scores among the sites. The ANOVA determined which scores of the groups were statistically different by region. The null hypothesis (H_0) of the ANOVA was that there was no difference among group means. The alternate hypothesis (H_1) was that at least one group differed significantly from the overall mean of the dependent variable. Finally, an analysis of descriptive statistics showing frequencies and percentages of the ages of participants, their gender, ethnicity, and site location was conducted. Descriptive statistics are important to understand the data set and the population being observed.

Some assessments contained missing data, but this did not affect the results. Data cleaning occurred by reviewing the assessments to ensure correct entries into SPSS. There are three basic assumptions about the data related to a paired sample *t* test. First, the two groups are paired. Second, there are no significant outliers in the difference between the two matched groups. Lastly, normality is assumed and means that the

difference of pairs will follow a normal distribution (Frankfort-Nachmias et al., 2015). Assumptions of the ANOVA test include independence of observations, meaning there are no hidden relationships among observations. Next, there is a normally distributed response of variables, and last there is homogeneity of variance within the groups (Frankfort-Nachmias et al., 2015). Violations of these assumptions are described in Chapter 4.

Threats to Validity

This study contained threats to internal and external validity. External validity concerns incorrect inferences being drawn from the sample and generalized to other persons, settings, or situations (Creswell & Creswell, 2018). Further, incorrect conclusions can be made from the data due to inadequate statistical power and sampling errors that are not taken into consideration (Creswell & Creswell, 2018). A major threat to external validity is the representativeness of the sample, or selection bias. The study was limited by the participants that were already taking part in a group and the data that was available at the time of collection. Inferences and assumptions only pertained to the sample at hand and generalizability to a larger population was limited. The results of the study were not generalizable to trauma victims that were not former child soldiers, or former child soldiers in other countries. The sampling population was not representative of all former child soldiers. Additionally, the sampling procedure included nonprobability sampling that was not random but based on convenience. Nonprobability sampling can increase sampling error (Frankfort-Nachmias et al., 2015).

Another threat to external validity is the interaction of history and the treatment. The results of this study were only relevant to participants in the groups at the time of the study. Replicating the study at later times to determine if the same results occur can help increase external validity (Creswell & Creswell, 2018).

Threats to internal validity refer to procedures, treatments, or experiences of the participants that can threaten correct inferences being made about the data for the target population (Creswell & Creswell, 2018). For this study, history may have been an internal threat. For example, time passed between the pre- and post-assessments and circumstances may have changed for the participant during that time, influencing their results. The groups being conducted were in unstable areas of Africa where tribal war and natural disasters were occurring, disrupting the flow of groups and prohibiting some participants from being able to attend regularly. Maturation was also another threat to validity in this study and like history, relates to the participants maturing or changing in ways during the study, also altering the results. (Creswell & Creswell, 2018). For example, this could be related to a person's physical age and the ages of participants were not controlled for in this study as the groups pre-existed, resulting in participant ages ranging between 18 and 52 years.

Instrumentation was another potential threat to internal validity. While the TSC-40 is a validated and reliable test for certain populations, it has not been validated for use in the languages it was translated into for this study. While a certified African interpreter was used to translate the measure into French and Swahili, there are no current studies for the use of the TSC-40 in these countries or with the former child soldier population.

Further, if French or Swahili was not the participants' native language, they may have had difficulty understanding some of the words or concepts, all of which are developed from Western culture. Additionally, many of the questions on the assessment are sensitive in nature and refer to trauma symptoms that the participant may have been reluctant to disclose honestly.

Not only is language a threat to validity concerning the instrumentation, but within the group experience itself. If the facilitator's use of a particular language is not the native language of the participant, there was potential for misunderstanding the concepts. Further, if the workbook was not in the participant's first or preferred language, completing the exercises may have been difficult and experiences for some participants may have been different than for others based on preferred language spoken or written. A similar threat to language barriers was the facilitation of the group and differences between styles and delivery of the curriculum. While all the facilitators are considered master trainers by Mending the Soul Ministries, meaning they have been trained in the curriculum and have facilitated groups before, there are no adherence measures within the healing model to ensure that the curriculum is being delivered with a level of fidelity. Mending the Soul Ministries is working on developing an adherence measure to be used among facilitators in Africa. While guidelines and best practices are provided for facilitators and they are encouraged to adhere to the curriculum in its order, there is no way to measure this currently. This may have affected outcomes for participants across different groups and was a threat to validity in this current study.

Ethical Procedures

Ethical procedures ensure that participants are not harmed in any way and that the study is held to the highest standards of rigorous scientific research that includes the welfare of participants. Ethical standards also call for the purpose of a study to contribute to social change for the population being studied (Creswell & Creswell, 2018). Ethical issues can arise prior to conducting the study, at the commencement of the study, during data collection, analyzing data, and storing and reporting data (Creswell & Creswell, 2018). It is vital to manage ethical issues at every stage of the study. Because this study was a non-experimental quantitative secondary data analysis of archival data, ethical concerns related to participants was minimized. The need to obtain informed consent from the original participants was eliminated. Written permission from Mending the Soul Ministries was obtained to access and analyze the data for this study. Prior to data collection and analysis, this study was subjected to review by the Walden University Institutional Review Board.

Identifying information was not collected on the assessments to protect the confidentiality and privacy of the participants. First and last initials were used to match the pre-and post-assessments but for this study the initials were redacted to further protect individuals. Facilitators did not require participants to fill out an assessment if they did not want to. Informed consent was given to the participants at the start of the group, informing them that Mending the Soul Ministries collects demographic information and assessments for research purposes only. The completed assessments were assigned a number and coded accordingly in SPSS. Data files created for this study were maintained

in a password protected file for the duration of the study and will be destroyed after five years. Any requests by Mending the Soul Ministries for the data to be returned will be granted.

Summary

Chapter 3 described the research design, rationale, and methodology of this study. The purpose was to explore whether the BHW treatment program was effective in reducing PTSD symptoms for a population of former child soldiers in Africa. The chapter outlined the sample population, sampling strategy, and a description of the measurement that was be used to collect data, the TSC-40. Ethical considerations and potential threats to validity were discussed. Lastly, the statistical test used for analyzing the data, a paired sample *t* test, was discussed. In Chapter 4, a detailed explanation of the study, including data collection will be presented. Results of the study will also be included.

Chapter 4: Results

The purpose of this quantitative, quasi-experimental archival study was to investigate the effectiveness of the BHW (Tracy & Tracy, 2019) treatment program in reducing trauma symptoms for adult former child soldiers who participated in a trauma recovery group in eastern Africa in 2021. The research question and null and alternative hypotheses explored in this study were the following:

RQ: Is the BHW treatment program effective at reducing trauma symptoms for former child soldiers?

H_o: The BHW treatment program does not reduce pretreatment trauma symptoms as measured by the TSC-40.

H_1: The BHW treatment program does reduce pretreatment trauma symptoms as measured by the TSC-40.

In Chapter 4, a detailed explanation of the study, including data collection and data analysis, and a detailed description of the results of the study is provided.

Data Collection

Permission from Walden University's Institutional Review Board (12-15-21-0986658) was granted in December 2021 to collect the archival data. The archival data for this study were obtained after approval from the Institutional Review Board was granted. The surveys were collected between September and November 2021 from the 24 sites that facilitated BHW groups between May and August 2021. There were no adverse events encountered, no additional protocols needed, and no deviations from the research plan presented in Chapter 3.

From the original 194 participants who started in groups, 166 completed. From that participant pool, 66 identified as having been a soldier in some capacity. For this study, the only assessments used were the ones who identified as former child soldiers. According to the group roster that was provided with the data, one group in the DRC disbanded due to absenteeism among the participants. A group in Uganda was not completed during this time frame as originally planned. From one of the sites, two participants dropped out before completion. As discussed in Chapter 3, the sample size needed to detect any statistically significant effects was 34. The sample size obtained for this study was 66. Based on the sites where the assessments were received from, the sample was divided into regions for the purpose of statistical analyses: Beni, Butembo, Goma, and miscellaneous sites were grouped close together by location but were not in one of the larger regions previously listed. Due to the level of ongoing and historic war conflict in these areas of the DRC, the sample would be considered representative of a larger population of former child soldiers in these regions (Kiyala, 2021).

Descriptive Statistics

The demographic characteristics of the sample included adult male and female former child soldiers from several regions in east Africa. The sample size was 66. The ages in the sample ranged from 18 to 52 years, with a mean age of 25 years (SD = 9.47). Table 1 presents the percentages of male and female participants, as well as the distribution of participants across regions. The ethnicity of the population was 100% Black. Most of the sample (77%) preferred to read and write in French, and (23%) preferred Swahili.

Table 1

Participant Age, Gender, and Region Information With Frequencies Reported in Parentheses

Variable	Sample breakdown
Age	
Range	18-52
Mean	25.95
Std. Deviation	9.47
Gender	
Female	42.4% (28)
Male	57.6% (38)
Region	
Beni	27.3% (18)
Butembo	34.8% (23)
Goma	19.7% (13)
Miscellaneous	18.2% (12)

Reliability of the Coefficients

Reliability refers to the consistency and reliability of the instrument being used. In the current study, a reliability analysis for each TSC-40 subscale, pre and post, was conducted to determine Cronbach's alpha, in addition to the overall pre- and postscores. Table 2 displays the calculations. Each subscale and overall score scale had an acceptable (α ranges from .60 to .69), good (α ranges from .70 to .79), or excellent (α >.80) coefficient of internal consistency (see Pallant, 2020).

Table 2

Reliability of the Coefficients

Variable	Prescore Cronbach's α	Postscore Cronbach's α
Dissociation	0.79	0.72
Anxiety	0.76	0.68
Depression	0.82	0.72
SATI	0.80	0.61
Sleep	0.72	0.60
Sexual problems	0.89	0.73
Overall score	0.96	0.91

Findings and Results

Assumptions of ANOVAs and Paired Sample *t* Tests

To determine whether the regions differed based on their pre- and postscore symptomology, I conducted 14 ANOVAs. The first assumption for a one-way ANOVA is that there is independence of observation (Frankfort-Nachmias et al., 2015). Based on the design of the current study, with all participants completing the pre- and postassessments once, independence of observations was achieved. The next assumption for a one-way ANOVA is that all variables are normally distributed (Frankfort-Nachmias et al., 2015). In the current sample, only the sleep prescore subscale (p = .270) and overall postscore scale (p = .185) were normally distributed, based on a Shapiro-Wilk's test. All other variables were not normally distributed (p ranges from < .001 to .049), meaning this assumption was violated. However, given that a sample size above 30 is considered robust, this violation was not problematic; therefore, the ANOVAs could still be conducted (see Pallant, 2020).

The final assumption is that there is homogeneity of variance for the variables across groups (Frankfort-Nachmias et al., 2015). Using a Levene's test of homogeneity, I

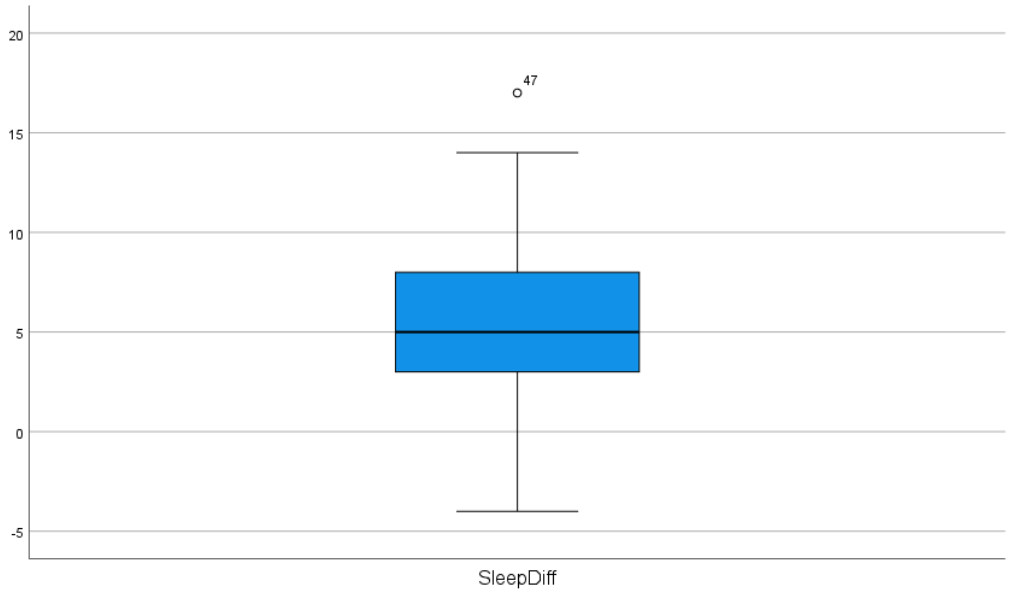
determined that the following variables met the assumption: sleep subscale for prescores (p = .113) and postscores (p = .312), dissociation subscale for postscores (p = .360), depression subscale for postscores (p = .155), sexual abuse trauma index (SATI) for postscores (p = .109), sexual problems subscale for post-scores (p = .678), and the overall post-scores scale (p = .055). The rest of the variables did not meet the assumption of homogeneity (p ranges from < .001 to .031). This could have been due to some of the regions having fewer participants than others, thereby making it difficult to achieve homogeneity across all regions. For example, the miscellaneous region had a lower number of participants (n = 12) compared to Butembo (n = 23). ANOVAs are reasonably robust to violations of this assumption if the largest group is relatively similar in size to the smallest group, for example, the larger group is no more than 1.5 times the smaller group (Pallant, 2020). In this case, the difference in size between the largest and smallest region slightly exceeded this rule, but the sizes were still relatively similar; therefore, the ANOVA could still be conducted. A post-hoc test was conducted to observe the regional differences on these five variables.

To answer the research question of whether participants' scores on PTSD symptoms differed before and after the treatment program, I conducted a paired sample t test. The first assumption of a paired sample t test is that the two groups are matched, which was met in this study as each participant had a pre- and postscore. The next assumption is that there are no outliers for the different scores for the variables. Box plots were made for the scores for all variables. There were no outliers except for the sleep variable where one participant's different score was beyond the maximum of the box plot

as shown in Figure 1. Because the sample size was above the 30 observation marker, the paired sample *t* test could still be conducted because this outlier would be less likely to have disproportionate influence (see Pallant, 2020).

Figure 1

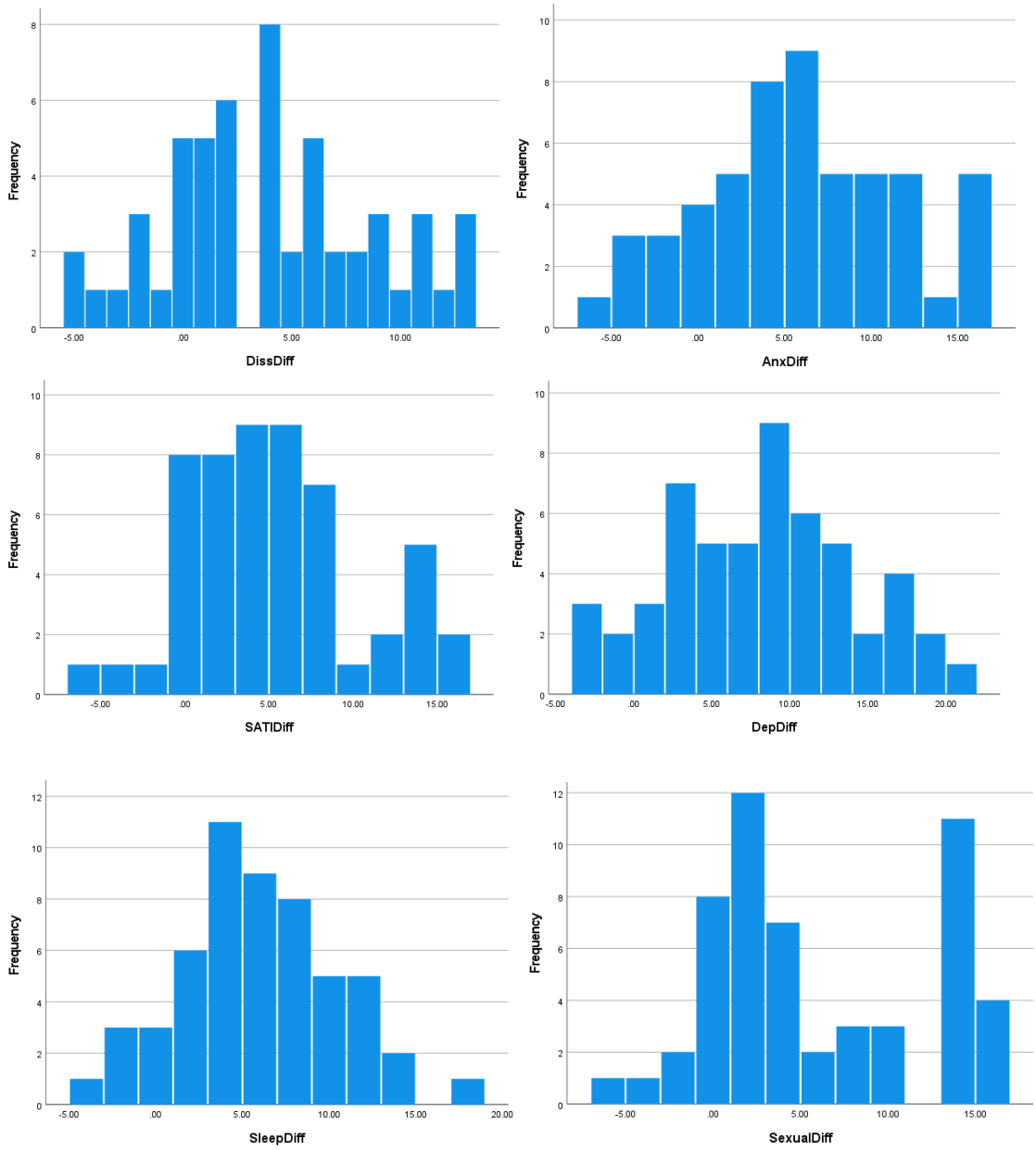
Box Plot of Different Scores for Sleep Variable at Pre and Post

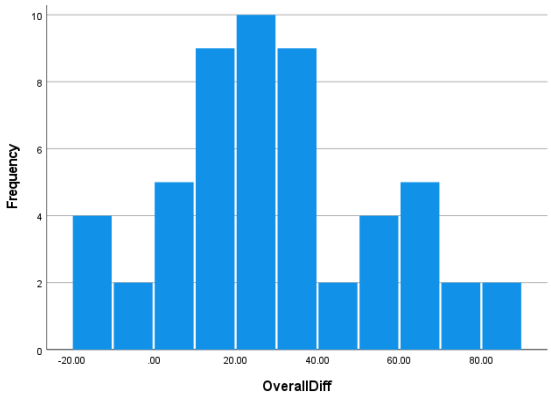


The last assumption for a paired sample *t* test is that the difference of pairs will follow a normal distribution. Histograms were made for all variables and are shown in Figure 2. Although the variables were not normally distributed, the means were still at the midpoint of the distribution. Because the sample size was considered large ($N = 66$), the test was considered tolerant of violations of this assumption (see Pallant, 2020).

Figure 2

Histograms for Different Scores of Dissociation (DissDiff), Anxiety (AnxDiff), SATI (SATIDiff), Depression (DepDiff), Sleep (SleepDiff), Sexual Problems (SexualDiff), and Overall (OverallDiff)





One-Way ANOVA

To evaluate whether there were differences in scores across regions, I conducted 14 one-way ANOVAs by region on the six subscales and overall pre- and postscore scales. At the preassessment, there were no significant differences between regions on anxiety and sexual problems variables ($F(3,61) = 1.74$, $p = .168$; $F(3,58) = 2.10$, $p = .109$). At the postassessment, there were no significant differences between regions on all six subscales and the overall score: dissociation ($F(3,60) = 1.00$, $p = .399$), anxiety ($F(3,60) = 0.19$, $p = .905$), depression ($F(3,59) = .206$, $p = .892$), SATI ($F(3,59) = .461$, $p = .710$), sleep ($F(3,59) = .184$, $p = .907$), sexual problems ($F(3,58) = .645$, $p = .589$), and overall score ($F(3,53) = .179$, $p = .910$). There were significant differences for five of the variables on prescores between the regions: dissociation ($F(3,60) = 8.32$, $p < .001$), depression ($F(3,61) = 3.66$, $p = .017$), SATI ($F(3,59) = 5.85$, $p = .001$), sleep ($F(3,62) = 3.52$, $p = .020$), and overall pre-score ($F(3,56) = 4.96$, $p = .004$). The means and standard deviations for each of these variables by region can be found in Table 3.

To determine whether there were still significant differences between regions, I conducted Tukey's HSD multiple comparisons tests for these five variables. For dissociation, there were significant differences between Beni and Goma ($p = .017$), as

well as Beni and miscellaneous ($p < .001$). For depression, there were significant differences between Beni and miscellaneous ($p = .037$). For SATI, there were significant differences between Beni and Goma ($p = .027$), as well as Beni and miscellaneous ($p = .002$). For sleep, there were significant differences between Beni and miscellaneous ($p = .012$). For overall, there were significant differences between Beni and miscellaneous ($p = .003$). There were no significant differences between any of the other regions for these five variables.

The only significant differences between regions for these five variables were in relation to the Beni region, which consistently scored higher than the miscellaneous region and sometimes the Goma region. In the paired sample *t* test, regional differences were not accounted for, but rather differences across all participants. The ANOVA results imply that some regions' scores changed more drastically than others. This difference in regions was observed only in pretest scores, while posttest scores showed no differences across regions.

Table 3

Means and Standard Deviations for Pre-Scores of Dissociation, Depression, SATI, Sleep, and Overall Score

Variable	Beni *M* (*SD*)	Butembo *M* (*SD*)	Goma *M* (*SD*)	Miscellaneous *M* (*SD*)
Dissociation	11.45 (3.56)	8.17 (5.08)	7.08 (3.99)	4.67 (2.50)
Depression	16.30 (6.04)	11.47 (8.15)	11.54 (4.35)	10.33 (3.7)
SATI	12.17 (5.04)	9.38 (6.37)	7.17 (3.46)	5.50 (3.09)
Sleep	10.83 (3.55)	8.61 (4.98)	9.46 (4.50)	6.17 (3.04)
Overall	69.50 (26.43)	51.07 (35.64)	47.67 (19.19)	35.75 (13.35)

Paired Sample *t* Test

The research question for the current study addressed whether the BHW treatment program was effective at reducing trauma symptoms for former child soldiers. First, a paired sample *t* test was conducted to compare pre- and postscores of PTSD symptomology. There was a statistically significant decrease in scores between the preassessment and postassessment, which are shown in Table 4. The results of the paired sample *t* test demonstrated that the BHW treatment program was effective in reducing PTSD symptoms for the sample. Because the findings were significant ($p < .05$), the null hypothesis was rejected. To determine whether there was a difference in pre- and postscores on each of the six subscales, I conducted paired sample *t* tests for each subscale. On each subscale, postscores were significantly lower than prescores: The Cohen's *d* coefficients for the subscales ranged from 0.89 to 1.31, indicating large effect sizes across all variables (see Pallant, 2020). The means, standard deviations, and paired sample *t* test results for pre- and posttreatment scores are presented in Table 4.

Table 4

Means, Standard Deviations, and Paired Sample t-Test Results for Pre- and Postscores of Overall, Dissociation, Anxiety, Depression, SATI, Sleep, and Sexual Problems Scales

Variable	Prescore *M* (*SD*)	Postscore *M* (*SD*)	*t(df)*	*d* [95%CI]
Overall	52.57 (28.80)	22.91 (14.69)	8.47 (53)	1.15 [0.80, 1.49]
Dissociation	8.52 (4.64)	4.42 (3.30)	6.97 (61)	0.89 [0.59, 1.18]
Anxiety	9.89 (5.43)	4.52 (3.27)	7.83 (63)	0.98 [0.68, 1.17]
Depression	13.00 (6.46)	5.48 (3.82)	10.41 (62)	1.31 [0.97, 1.65]
SATI	9.21 (5.50)	4.46 (3.03	7.19 (60)	0.92 [0.62, 1.22]
Sleep	9.08 (4.39)	3.92 (2.72)	9.40 (62)	1.18 [0.86, 1.50]
Sexual Problems	9.03 (7.38)	3.31 (3.40)	7.14 (58)	0.93 [0.62, 1.23]

Note. All paired sample *t* test results had a $p < .001$.

It is important to note that for the dissociation, depression, SATI, sleep, and overall scales, there were significant differences in pre-scores across regions, particularly between the Beni region and other regions. However, these differences did not exist in the postscores, suggesting the intervention may have negated regional differences. When looking at the entire sample, there was a significant decrease in scores across all seven variables. Bringing all these results together, these findings would suggest, even though the program appeared to be effective in reducing trauma symptoms for everyone, there may have been a larger impact of the program on participants from regions where there was higher symptomology reported on pretests.

Summary

A reliability analysis was conducted and demonstrated acceptable to excellent reliability for all the subscales and the overall scores, meaning that with internal reliability being met, the results of the analyses can be considered trustworthy. Fourteen one-way ANOVAs were conducted to determine if there were significant differences in

pre- and postscores among the symptom variables across the regions. To further observe where the differences existed, Tukey's HSD multiple comparisons tests were conducted. Regional differences were only found on the prescores for 5 of the 14 variables, and between Beni and Goma and miscellaneous region. The postscores showed there were no differences among the variable scores across regions. The Beni region that had higher scores on all symptom variables at preassessment no longer showed mean differences at postassessment across regions.

Next, to address the research question, a paired sample *t* test was conducted for the overall pre- and postscores, indicating a significant decrease in means. These results suggest that the BHW program was effective at reducing reported PTSD symptomology in the sample. In conclusion, the findings were significant, therefore the null hypothesis was rejected.

Following the evaluation of the overall pre- and postscores, paired sample *t* tests were conducted for all six subscales to include dissociation, depression, sleep, sexual problems, SATI, and anxiety to determine whether BHW was effective in reducing these specific PTSD symptoms. The findings showed a significant decrease in means between pre- and postassessment, suggesting that the BHW program was effective at reducing reported PTSD symptomology across all subscales.

Chapter 5 will include an in depth interpretation of the results of the study, a discussion of the limitations of the study, provide recommendations for future research, and highlight the implications for social change.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative, quasi-experimental archival study was to investigate the effectiveness of the BHW (Tracy & Tracy, 2019) treatment program in reducing trauma symptoms for adult former child soldiers who participated in a trauma recovery group in eastern Africa in 2021. I used archival data to statistically analyze the extent to which participants' reported trauma symptoms were reduced as a result of completing the treatment program. This study was conducted because the use of child soldiers is still a practice taking place in many African countries. The effects of child soldiering on individuals, families, and communities are detrimental. Postconflict mental health symptoms develop and do not dissipate without targeted and effective interventions (Betancourt et al., 2020; Denov, 2020). More research on effective and evidence-based treatments is needed to treat this vulnerable population and improve mental health outcomes for them (Betancourt et al., 2020; Robjant et al., 2020). BHW (Tracy & Tracy, 2019) is being used in several East African countries but had not been studied for its effectiveness in reducing PTSD symptoms for former child soldiers. The goal of the current study was to examine the effectiveness of the BHW program by using statistical analyses to measure pre- and postscores on the TSC-40, a validated measure of PTSD symptoms.

Paired sample *t* tests were conducted to measure the overall pre- and postscores on the TSC-40, as well as the six subscales that included dissociation, anxiety, depression, SATI, sleep disturbance, and sexual problems. Statistically significant results were found for each of the seven scales; therefore, the null hypothesis was rejected.

Interpretation of the Findings

Analysis and Interpretation of the RQ

The research question addressed whether the BHW program would impact PTSD symptoms for former child soldiers who participated in treatment groups. The results of this study indicated a statistically significant decrease in scores between the preassessment (M = 52.57, SD = 28.80) and postassessment (M = 22.91, SD 14.69), $t(53) = 8.47$, $p < .001$ (two-tailed). This decrease in scores occurred across all six subscales as well.

The results of this study confirmed the findings of previous studies that examined the effects of a research-based trauma intervention with former child soldiers. Hinsberger et al. (2017) used a variation of NET for an offender population and found a statistically significant reduction in PTSD symptoms at the first follow-up postintervention. The program was not culturally adapted for the population, but Hinsberger et al. concluded that trauma-focused treatment can reduce PTSD symptoms for individuals living in unsafe conditions in low-income countries. I used a culturally adapted research-based trauma intervention in high conflict regions and found statistically significant reductions in PTSD symptoms as well.

Robjant et al. (2019) expanded on Hinsberger et al.'s (2017) study by applying a culturally adapted version of NET to a population of former child soldiers. Robjant et al. used treatment and control groups to administer the intervention and emphasized the value of group work among participants to create connection and safety. Group differences on clinical symptoms of PTSD were statistically significant. Robjant et al.

highlighted the use of culturally adapted evidence-based trauma interventions to impact symptoms of highly traumatized populations. I did not use treatment and control groups but similarly focused on group interventions with highly traumatized populations and found statistically significant outcomes on a reduction in PTSD symptoms.

Koebach et al. (2021) also applied an adapted version of NET to a treatment and control group of former child soldiers in the DRC, a high conflict area. Preassessments were given along with assessments at intervals during the treatment. Koebach et al.'s results differed from the other studies and the current study by indicating treatment outcomes over the course of the intervention. Similar to the other studies as well as the current study, statistically significant outcomes showed lower PTSD symptoms for the treatment group. Koebach et al. concluded that treatment interventions grounded in theory and research can impact trauma symptoms in unstable, war-affected environments. The current study confirmed these findings by demonstrating a significant reduction of PTSD symptoms in former child soldiers in areas of the DRC, even without a treatment or control group.

McMullen et al. (2013) applied a group-based culturally adapted version of TF-CBT for underage former child soldiers. Compared to a control group, there were significant reductions in PTSD symptoms, and treatment gains were maintained at a 3-month follow-up assessment. In contrast, the current study focused on adult participants and did not include a CBT model. McMullen et al. noted several key factors similar to the current study. First, local leaders were trained to administer the intervention, ensuring cultural appropriateness. The curriculum was tailored to include stories and metaphors

relevant to the culture. The group aspect fostered safety, stabilization, and connection, each being important elements of trauma recovery (Herman, 2015). The current study indicated the effectiveness of the BHW treatment program that included indigenous leaders, a curriculum created with an emphasis on African culture and group work facilitation. The current study indicated similar significant reductions in trauma scores at postassessment. However, a key difference was that there were no follow up assessments given in the current study to observe treatment outcomes months after the intervention.

In a study that included Herman's (2015) model of trauma recovery as the basis for an intervention, similar to the current study, Stepakoff et al. (2006) found significant reductions in trauma symptoms after the intervention in a refugee camp. In contrast to the current study, Stepakoff et al. assessed participants during and after the intervention, and the participants were not exclusively former child soldiers. Like similar studies, Stepakoff et al. noted the value of using local leaders to facilitate group work and the value of using a trauma model to foster healing in unstable environments with highly traumatized populations.

Lastly, Schultz et al. (2016) conducted a study using a Scripture-based model of healing, like the theological components in the BHW, and used a workbook with participants in a group setting. Like the current study, Schultz et al. used a validated measure of PTSD symptoms and found a significant decrease in symptoms at pre- and posttreatment, as well as at a 6-month follow-up. Based on their findings, Schultz et al. asserted that there is a continued need for faith-based healing models that are culturally appropriate and that include trauma-informed research in their curriculum to effectively

impact trauma symptoms for vulnerable populations. The current study addressed the need for another theologically and psychologically informed treatment intervention that demonstrates effectiveness in reducing PTSD symptoms.

In summary, the current study confirms previous findings in the research that trauma-informed interventions utilizing evidence-based models of recovery are effective in treating highly traumatized populations in war-affected countries. The main difference between the current study and the findings in the literature is that the current study did not include follow-up assessments at intervals postintervention and did not have treatment or control groups. However, the findings of the current study are promising in that without the random assignment of control and treatment groups, significant mean differences were found across the entire sample between pre- and postassessment, suggesting effectiveness of the BHW program to treat highly traumatized former child soldiers in unstable environments.

Herman's Model of Trauma Recovery

Herman's (2015) model of trauma recovery was chosen as the theoretical framework for this study because the BHW program used the stages to create the curriculum. Herman proposed three overarching stages that a victim of trauma navigates to heal from trauma and successfully move forward: safety and stabilization, integration, and reconnection. The theory suggests that once these stages have been successfully addressed, symptoms may be significantly reduced and quality of life may be improved (Herman, 2015; Zaleski et al., 2016). If the stages of recovery are used as a model for a

trauma recovery program, there may be a reduction in symptoms among trauma survivors.

The goal of the current study was to determine whether the BHW, being grounded in Herman's (2015) model, was effective in reducing trauma symptoms for the sample. The statistical analyses showed a significant reduction in reported trauma symptoms after the intervention. Stepakoff et al. (2006) used Herman's stages of recovery with war-affected populations in Africa and saw a significant reduction in trauma symptoms as well. Notably, Stepakoff et al. found statistically significant results 12 months after the intervention using Herman's model. The current study added to the body of literature related to effective trauma recovery interventions by demonstrating the value and effectiveness of using a model such as Herman's to guide recovery efforts and reduce symptomology.

Limitations of the Study

This study had several limitations. First, response bias may have been present. Response bias occurs when the participant underreports or denies a symptom. Response bias can also occur when the participant responds the way they think the researcher or facilitator wants them to or when the questions are sensitive in nature (Frankfort-Nachmias et al., 2015). In the current study, the questions being asked were related to trauma and the presence of potentially troubling symptoms that the participant may have wanted to deny. The participants may have responded in a way to please the facilitator of the treatment program, reporting a higher reduction of symptoms than was the case.

Another limitation was related to the design of the study. Due to former child soldiers in another country being a vulnerable population to gain access to, the study was limited to archival data collected from groups that had already been formed. Therefore, there was no control over random assignment of participants, fidelity to the curriculum by the facilitators, and similar administration of the instrument across groups. Because there was a mix of former child soldiers with nonformer child soldiers in each group, the generalizability of the results was limited to those who identified as former child soldiers. The population sampled was only representative of former child soldiers in these regions. The sample size was also small. With a larger sample size from each region, regional differences could have been evaluated further for the level of decline in PTSD symptoms. More representation from different regions is necessary to determine whether the program works as effectively across regions.

Next, there was a limitation regarding group facilitation. Currently, Mending the Soul Ministries does not have a formal measure of facilitator adherence to the curriculum. Best practices and guidelines are provided to facilitators upon training, but there are no measures in place to follow up with administration of the treatment program. Therefore, it is unknown how similarly the groups were facilitated and how similarly the assessments were administered across groups. Without the control of an experimental group to control for these variables, this constituted a limitation in the current study.

Another limitation of the study was the use of the TSC-40, which had not been validated as a measure for this population. The TSC-40 is a validated measure of PTSD symptoms, but it had not been validated for use in French and Swahili or with former

child soldiers. Western concepts of trauma, while translated verbatim into French and Swahili, may lack the conceptual meaning in another culture, and may have led to misunderstanding in reporting of symptoms.

Recommendations for Future Research

One recommendation for future research would be to use an experimental design in which participants are randomly assigned to treatment groups and compared with a control group. This would allow for less error related to sampling and more control over variables. The comparison to a control group would offer more data related to the ability of the program to reduce trauma symptoms for participants. Additionally, measuring outcomes for populations other than former child soldiers could add to the data on the program's effectiveness to reduce trauma symptoms in various populations and locations. Because there were differences in preassessments on PTSD scores between the regions, it would be beneficial to obtain data from more people in each of these regions to be confident that the regional differences in symptoms are due to the region people are from rather than chance.

Another recommendation would be a longitudinal study that would offer insight into the effectiveness of the BHW program to reduce trauma symptoms over time. For instance, follow-up measures could be taken at varying intervals, such as 3, 6, 9, and 12 months postintervention. The most effective interventions from the literature review showed significant results at multiple intervals postintervention.

Additionally, a qualitative design could offer insight into what components of the treatment program are most impactful on trauma symptoms. Understanding individual

participants' experiences of the program could add valuable information to understanding what parts of the process contribute to sustainable decreases in trauma symptoms. This could also allow for important feedback to facilitators regarding what is most impactful about the curriculum and could lead to curriculum adaptations for certain populations. For example, exploring the impact of the processes of journaling, group processing, and experiential exercises could increase the utility of the program in mitigating the effects of trauma.

Implications for Positive Social Change

Positive social change can impact individuals, families, and communities in sustainable ways that last long after a program, policy, or intervention has been implemented. One individual affected by positive social change may impact their family, and so on. Positive social change creates a ripple effect that can be seen and felt decades and generations later (Walden University, 2017). The current study filled a gap in the research by investigating a trauma recovery program grounded in psychological research to impact those affected by war in Africa.

One healed individual leads to a healed family, which leads to a community of healed people (Betancourt et al., 2020). The statistically significant results of the current study demonstrated that for this population in these particular regions, trauma symptoms were reduced by participating in the program. The consensus among existing research on former child soldiers showed that effective and evidence-based trauma interventions impact positive outcomes for individuals (Bentancourt et al., 2020; Denov, 2020; Robjant et al., 2019; Robjant et al., 2020). Comparison of means between randomly assigned

treatment and control groups should be considered to add to the evidence of the effectiveness of the program while controlling for variables.

The current study may promote social change by identifying a promising trauma recovery intervention that positively impacts PTSD symptoms for former child soldiers, fostering hope for life after the trauma of war, as purported by Herman (2015) in their research on trauma recovery. Furthermore, the results of this study may assist Mending the Soul Ministries in receiving additional funding for advancement of the curriculum to more areas in Africa affected by war because it provides research on their work, lending credibility to their program. The more the treatment program can be disseminated, the more potential for debilitating PTSD symptoms to be reduced in highly traumatized areas of Africa.

Lastly, for future practice, it is recommended that Mending the Soul Ministries consider adopting or creating a basic measure of facilitator adherence and fidelity to the curriculum. Presently, Mending the Soul Ministries does not have a formal method of assessing facilitator adherence to the curriculum. Assessing this may lead to better outcomes for participants in future groups.

Conclusion

The use of child soldiers as weapons of war that continues around the world is a human rights violation and contributes to the onset and perpetuation of severe mental illness in individuals forced to commit war acts. Child soldiering adversely impacts children, their families, communities, and countries. Without the proper intervention,

these children grow up to be adults that struggle to function mentally, obtain and keep employment, and start and provide for their own families (Betancourt et al., 2020).

Identifying and researching interventions that are effective in reducing trauma symptoms is critical to helping individuals in low-income countries have a chance at thriving in the aftermath of war conflict. Research in trauma recovery for former child soldiers emphasizes the ongoing need for evidence-based, sustainable, and effective trauma interventions (Betancourt et al., 2020). The results of this study contribute to this endeavor by showing the effectiveness of BHW to reduce trauma symptoms for former child soldiers in regions in east Africa.

Despite the limitations of the current study, the results offer the encouragement of a promising intervention to counter the seemingly insurmountable hopelessness related to the effects of child soldiering. On a small scale, the current study showed data that supported the reduction of trauma symptoms even under the most horrific conditions of human suffering. The emergence of the BHW program as an effective antidote to the debilitating symptoms of trauma is hopeful for the field of trauma research for this population.

The current study can be the catalyst for further studies related to BHW and its impact on various populations and settings in third-world countries. The study can be replicated, and the design modified to add to the data on its effectiveness under various conditions. More research may lead to increased funding opportunities for the program to be disseminated into rural areas where indigenous leaders can be equipped to intervene within their communities.

Additionally, the BHW program may be an effective tool for other non-profit organizations to obtain and utilize. The current study was conducted by facilitators that were already a part of various mental health and social service agencies that provide a variety of services to marginalized populations. Being able to equip existing agencies with a low-cost, yet evidence-based option for treating complex trauma is the impetus for sustainable social change. Increasing access to free trauma care that is grounded in trauma research and contextualized for the culture to enhance sustainability may be a powerful weapon against the repercussions of PTSD, especially in unstable and low-income countries.

The research in the field of child soldiers paints a bleak picture of a nefarious practice that leaves long-lasting destruction in its wake. However, the research outcomes also demonstrate a common theme of hopefulness, healing, and long-term positive outcomes when targeted, evidence-based, and culturally sensitive interventions are made available to those needing it (Betancourt et al., 2020). Through this study and future studies, BHW has the potential to emerge as an intervention recognized in the literature as meeting these criteria and providing for the trauma care of former child soldiers on a larger scale.

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