UNIVERSITY OF CAPE COAST

MODERATING ROLE OF PSYCHOLOGICAL FLEXIBILITY ON THE RELATIONSHIP BETWEEN POST TRAUMATIC STRESS DISORDER (PTSD) AND HEALTH FUNCTIONING OF VICTIMS OF DEFILEMENT

EMMA ARABA ESHUN

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BY

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NOVEMBER 2020

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature…… Date……

Name: ……

Supervisor's Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature …… Date……

Name: ……..

Co-Supervisor's Signature…….. Date……

Name: ……..

ABSTRACT

The objective of the study was to examine the moderating effect of psychological flexibility in the relationship between Post Traumatic Stress Disorder (PTSD) and Health functioning of victims of defilement in the greater Accra region. A cross-sectional study design was adopted to select samples of victims of defilement aged 8-15years, who reported at the greater Accra regional DOVVSU unit and Accra police hospital. The data collection was conducted using the Child PTSD Scale (CPSS), Child Psychological Versatility Questionnaire (CPFQ) and the World Health Organisation Disability Assessment Scale (WHODAS) 2.0 version. There were 87 participants who took part in the study with a mean age of 12.48±2.29 years. Analysis discovered that majority (78.1%) of the participants experience moderate to extremely severe PTSD. A large portion (93.3%) had moderate level of psychological flexibility with 48.3% of the participants experiencing moderate level of health functioning. In addition, it was observed that psychological flexibility was not a major moderator of the PTSD and health functioning. Based on the results, it was concluded that victims of defilement suffer from PTSD that influences their health functioning, although the interaction was not moderated by psychological flexibility. The study proposed psychosocial treatment that target Psychological flexibility as a way of enhancing coping to increase the outcomes for victims of defilement.

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DEDICATION

To my father: Emmanuel Amos Eshun

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

PTSD	Post Traumatic Stress Disorder
PF	Psychological Flexibility
HF	Health Functioning
DOVVSU	Domestic Violence and Victim Support Unit

CHAPTER ONE

INTRODUCTION

Defilement has long been recognised by scholars as one of the commonest but detrimental actions (i.e., violence) perpetrated against children, especially females (Hills, Mercy, Amobi, & Kress, 2016; Okello & Hovil, 2007). Ghana's prevalence of defilement cases is not different from that of other developed economies. Even though there are laws that deal with the perpetrators of defilement in Ghana, the phenomena still linger on. Despite the established linkage among sexual abuse perpetrated against children and the onset of psychological health problems such as depression and posttraumatic stress disorder (PTSD) (Ombok, Obondo, Kangethe, & Atwoli, 2013; Syengo-Mutisya, Kathuku, & Ndetei, 2008), it is surprising that such research evidence in low and-middle-income countries (LMICs) such as Ghana is relatively limited compared with the advanced nations. This has therefore, become necessary for scholars to probe into this problem as it creates a void in the available set of literature. The study seeks to provide the necessary guidance for health practitioners in helping victims of defilement manage or dealt with the negative consequences of the incidence, particularly PTSD.

Background to the Study

Defilement remains a serious and devastating problem not only in Ghana but also in the whole world. In fact, many studies on the subject have consistently shown that defilement is a major public health concern (Okello & Hovil, 2007). Globally, it has been projected that about one billion children between 2-17years have witnessed some sort of sexual exploitation in the past year (Hillis, Mercy, Amobi, & Kress, 2016). Likewise, Pereda, Forns and

Gome-Benito (2009) in their work revealed that about 7.9% of boys and 19.7% of girls suffer some type of sexual exploitation before 18 years of age globally and geographically, Africa has the highest record of child sexual assault incidence rate (34.4%).

In Ghana, the prevalence of defilement appears to be consistent with the global situation. For instance, reports from the annual crime statistics show that rape and defilement formed part of the major offences committed in Ghana and they are considered the most serious offences which attracted public concern. Statistics from the Domestic Violence and Victims Support Unit (DOVVSU) show that in cases of defilement rather than rape, Ghana reports higher figures. More so, according to the Statistics and Information Technology Unit (SITU), CID Headquarters, Accra, available data on reported cases of defilement in the greater Accra region (2015-2018) were 1,811 (see Table 1).

Table 1- ***Reported cases of defilement***

Year	Number of defilement cases
2015	785
2016	308
2017	534
2018	634
Total	1,811

Source: SITU CID Headquarters, Accra (2015/2018)

In addition, the DOVVSU Director disclosed that Ghana reported defilement instances in 2019 that saw an upward thrust with 1,270 cases (Ola-Morris, 2020).

In terms of regional disaggregation, the Greater Accra region has recorded the highest number of reported cases of defilement from 2016 to

2017 with 308 cases in 2016 and 534 in 2017 respectfully (Myjoyonline.com, 2018). These figures, however, according to the report represent only reported cases, as majority of cases go unreported (Chopin & Caneppele, 2019).

This phenomenon is usually referred to as the 'dark figure' and as such factors such as threats from perpetrators have been noted for the dark figure. For instance, Agu, Brown, Adamu-Issah and Duncan (2018) revealed from their study that about 11.2% of pupils enrolled in most of the public primary schools in Ghana have been sexually abused and these victims may have been threatened by their perpetrators not to disclose it. Most victims of rape and defilement were mostly below the age of 16 years (Bortei-Doku & Kuenyehi, 1998).

The treaty relating to the Protection of the Child, of which Ghana is a signatory, compels party states to follow all suitable regulatory, administrative, social and scholastic establishments towards adopting measures to defend children from all kinds of violence consisting of defilement and sexual abuse (UNICEF, 1989). Ghana in response to the right of the child has criminalised defilement to prevent its occurrence and to protect children. Defilement is known as natural or unnatural carnal knowledge of any minor under the age of 16 in Chapter 6 of Ghana's Criminal Offences Act, 1960 (Act 29). On the other hand, when a person knows that a child under the age of 16 has been sexually assaulted either naturally or unnaturally, he or she is guilty of a crime and can be sentenced to between seven and 25 years in jail on summary conviction (Criminal Offences ACT, 1960).

Despite the existence of the law, the occurrence of defilement cases is being recorded almost every single day with reports from either the electronic or the print media leaving victims to bear the consequences. A case in point is the recent example of a 52-year-old Fetish priest who was arrested at Awutu Bereku in the Central Region for defiling a 6-year-old child (myjoyonline.com, 2020).

The outcome of defilement ranges from short to long-term negative physical and psychosocial outcomes which mostly interfere with victim's normal developmental growth (Mutavi, Mathai, Kumar, & Obondo, 2016; Furgursson, McLeod, & Horwood, 2013). These negative outcomes may continue to linger on for several years in different ways and sometimes produce severe psychological damage that impairs a number of developmental processes that may have long-term effects on emotional control, reasoning style, and coping mechanisms even into adulthood (Dunbar et al., 2013). Additionally, as victim endure deeper psychological trauma, the same person becomes dysfunctional while he/she continues to suffer in silence (Kokonya, Kuria, Ong'echa, Mburu, & Ndetei, 2014).

Further symptoms identified with victims of defilement through a study conducted in the northern part of Ghana revealed that individuals undergoing all types of child sexual assault (touch and non-contact) exhibit significantly less psychological wellbeing than their peers who have not encountered child sexual abuse or only one type of child sexual exploitation (Salma, 2014). Aside from the psychological effects, unwanted pregnancies, sexually transmitted diseases and physical deformity have been associated with defilement (Böhm, 2017).

Moreover, in response to the trauma, the victim may experience fear, hopelessness, or horror and respond with a distinctive set of physiological and psychological feedbacks, which may prolong the overwhelming and perplexing emotional state (Kokonya et al., 2014). Symptoms of Post-Traumatic Stress Disorder are associated in some of these cases (PTSD). Consequently, victims of defilement have been found to be more likely to experience PTSD relative to those experiencing non-assaulted injuries such as accidents and natural disasters (Zoladz, & Diamond, 2013; Norris et al., 2002).

An array of studies has reported symptoms of PTSD following defilement, which significantly affects the health of victims. Even victims who may not manifest full-blown PTSD symptoms may exhibit some minor symptoms later in life (Mutavi, Mathai, Kimar, & Obondo, 2016; Furgursson, McLeod, & Horwood, 2013; Trickett, Noll, & Putnam, 2011). Studies also identified a link between the PTSD level and the age at which the trauma was encountered by the person. One research, for example, found that young people typically display elevated levels of PTSD symptoms relative to the adult population in the first few months after a traumatic incident (Norris et al., 2002).

Related signs and symptoms of PTSD, including re-experiencing, avoidance and hyper-arousal associated with PTSD found in adults, are often manifested in children with PTSD, according to Carson, Foster and Tripathi (2013). However, the requirement by Diagnostic and Statistical Manual (DSM-IV) standards for diagnosing PTSD in children is that a child should exhibit at least three avoidance symptoms, two increased arousal signs and at least one re-experiencing symptoms (Carson, Foster, & Tripathi, 2013).

Furthermore, a lot of sexually abused victims with symptoms of PTSD may go unnoticed leading to the progression of complex protracted PTSD which occurs concurrently with other psychological illnesses such as Attention Deficit Hyperactivity Disorder (ADHD) and major depression maybe misdiagnosed (Kokonya et al., 2014). It should be remembered that the signs of PTSD shown by each child are unusual, as there can be a variation of symptoms between two children who may also fit the diagnostic criteria for PTSD. Yet, PTSD signs can be missing in any proportion of sexually assaulted people (Putnam, 2003). Factors such as infant characteristics, incident characteristics and family/social system characteristics have been reported to affect PTSD development (Putnam, 2003).

Besides, children who were threatened by the perpetrator to comply were shown to possibly fit the PTSD criteria as compared to those who were abused in the absence of force or threat (Wolfe, Sas, & Wekerle, 1994). The geographical location of victims has also been linked to the growth of PTSD (Norris, et al., 2002). Other causes have been shown to contribute to the creation and persistence of PTSD, such as faith and spirituality (Koenig, Al-Zaben, & VanderWeele, 2020; Blanc, Rahill, Laconi, & Mouchenik, 2016). It has been found that perceived lower levels of social care and defective managing strategies coupled with repeated episodes of defilement have been shown to risk the reaching of a complex type of PTSD identified by Gilbert, Wisdom, Browne, Furgusson, Webb and Janson (2009).

PTSD may have both physical and emotional consequences on the wellbeing of the victim. The American Psychiatric Association (2013) classified the influence of PTSD on Intrusion, Avoidance, Negative changes in

Perceptions and Moods, as well as Arousal and Reactivity in the fifth edition on the DSM of behavioural disorders (Armour, Millerová, & Elhai, 2016). The clinical appearance of PTSD generally varies, since some of the patients show re-experiencing, emotional and behavioural symptoms (Regier, Kuhl, & Kupfer, 2013). Other signs are anhedonic or dysphoric mood states, adverse cognitions, exhilaration and reactive-externalisation, dissociative symptoms and or combinations of certain symptom trends (Regier, Kuhl, & Kupfer, 2013).

The American Academy of Child and Adolescent Psychiatry has identified other child-specific signs, including anxiety over mortality at an early age, loss of interest in activities, headaches, stomach-aches, insomnia, irritability, clingy and thumb sucking ([AACAP], 1998). Although PTSD may not be a fatal disorder, it may lead to conduct disorder, delinquency, depression, substance abuse, and other risky behaviours (Srivastava, 2011).

The health of children is foundational to health and wellbeing in later life. As such any stressful life experience during early years is more intrusive and long-lasting than they are for those exposed to stress only in their adulthood (Lupien, McEwen, Gunnar, & Heim, 2009: Putnam, 2003). Children's ability to control, recognise and express emotions may be compromised following exposure to trauma at an early stage in life and this negatively affects the child's central personality and capability to relate with others (Lubit & Eth, 2003). Additionally, most abused children have considerable problems that affect their psychosocial life and development (Putnam, 2003). For instance, Mundukottackal and Ravindranadan (2018), in

their study, revealed that sexually abused adolescent reported low levels of emotional intelligence and psychological wellbeing.

Relatively, PTSD may appear as a simple disorder nonetheless, the range of accompanying symptoms of the disorder can result in significant functional health impairment as this makes them hard to live with (Kaminer, Seedat, & Stein, 2005). For example, living with someone who is easily startled, has nightmares and avoids all types of social circumstances may affect most caring family members (Kramer & Landolt, 2011). That is, PTSD in children can damage the child's relationship with parents, siblings, friends and other caregivers (Kaminer, Seedat, & Stein, 2005).

Defilement is a core hazard to children's health and society as a whole, according to the current United Nations Sustainable Development Goals, which establish the global human development agenda for 2015-2030. Target 5.2 aims to reduce all forms of violence against women and children, including sexual harassment. Goal 16.2 aims to eradicate child enslavement and prostitution. (United Nation General Assembly, as cited in Mathews & Collin-Vézina, 2016). In an attempt to safeguard the health of victims of defilement and assisting victims heal from the trauma, efforts could be geared towards the enhancement of psychological flexibility in victims to help them continue to work towards their values in life.

Indeed, emerging research findings suggest that psychological flexibility seems to show a significant role in alleviating principal symptoms of PTSD, such as avoidance and negative cognition (Sairanen, Lappalanen, & Hiltunen, 2018; Rolffs, Rogge, & Wilson, 2018). However, Psychological Flexibility as described by Kashdan and Rotterburg (2010) is the extent to

which a person adjusts to situational requirements, reconfigures mental resources, changes perspective and balances conflicting interests, needs and areas of life. This implies that enhancing victims of defilement PF may help them cope with the traumatic pain and at the same time work towards achieving their desired values amidst the pain. That is, PF may serve as a protective factor to psychological and emotional health in the event of a traumatic experience such as defilement (Graham, Gouick, Krahe, & Gillanders, 2016).

Statement of the Problem

In Ghana, defilement has been recognised as one of the major public health problems as many studies on the subject have been conducted. However, these studies mostly concentrate on the occurrence and causes of child sexual exploitation, non-disclosure of the abuse, cultural, legal, economic and social aspect of the problem and hardly do these studies look at the psychological perspective of defilement (Bohm, 2017; Morhe & Morhe, 2013; Boakye, 2009; Coker-Appiah & Cusack, 1999). The findings of some of these studies reveal some of the policy gaps in the management of defilement. For instance, due to the primitive nature of our laws and culture, sometimes when offenders are punished it is not properly communicated and this make more people engage in the act with ease (Morhe & Morhe, 2013; Boakye, 2009). Furthermore, many of the studies on defilement are centred on adult with history of defilement and are mostly qualitative in nature. The point of departure for this research is going for quantitative study to test the issue on a larger population.

Research has shown that there is a link between sexual abuse of children and the development of psychological disorders such as depression and PTSD (Ombok, Obondo, Kangethe, & Atwoli, 2013; Taft, Resick, Watkins, & Panuzio, 2009; Syengo-Mutisya, Kathuku, & Ndetei, 2008). Nonetheless, most of these studies were concentrated in developed countries with few studies in less developed countries leaving a wide gap of knowledge in the literature in the context of developing country in general and Ghana in particular.

Furthermore, related studies conducted in Kenya on the relationship between defilement and PTSD, which identified a positive association between the variables, did not explore the possible effect of PF on the relationship (Mutavi, Mathai, & Abondo, 2016). Even in the developed countries, study on psychological flexibility mostly concentrated on adult population. In line with this, Chan and Bordieri (2018) raised contextual issues and suggested that psychological flexibility be further explored in diverse populations such as Africa and specifically Ghana.

Furthermore, high prevalence of defilement cases in Ghana has been well established and this is consistent with global occurrence. Nevertheless, it appears not many studies have been done in assessing PTSD outcome following defilement in victims. There is the need to investigate the psychological effects following defilement and to establish some of the specific psychological distresses which accompany defilement. Also, how these psychological distresses impact the life of the victims must be explored. Besides this variable, PF must be explored to determine its relevance in the management of victims of defilement.

Following these gaps in literature and commendations for further studies on the issue, this research attempted to bridge the difference in literature by exploring the moderating impact of PF on the relationship between PTSD and health functioning of victims of defilement from the perspective of children in their current condition.

Purpose of the Study

The main purpose of the study is to investigate the moderating role of Psychological flexibility in the relationship between PTSD and health functioning of victims of defilement in the Greater Accra Region. Specifically, the study seeks to:

1. explore levels of PTSD experienced by victims of defilement
2. determine levels of PF among victims of defilement
3. explore levels of Health Functioning of victims following defilement
4. assess the effect of defilement of PTSD on the Health Functioning among victims of defilement
5. examine the effect of PF on Health Functioning of defilement of victims.
6. assess the impact of PF on PTSD following defilement
7. investigate the moderating role of PF on the relationship between PTSD and Health Function following defilement

Research Questions

1. What are the levels of PTSD experienced by victims of defilement?
2. What are the levels of PF in victims of defilement?
3. What are the levels of Health Functioning among victims of defilement?

Research Hypotheses

1. H_0: There is no significant relationship between PTSD and Health Functioning of victims of defilement.

   H_1: There is a significant relationship between PTSD and Health Functioning of victims of defilement.

2. H_0: There is no significant relationship between PF and Health Functioning of victims of defilement.

   H_1: There is a significant relationship between PF and Health Functioning of victims of defilement.

3. H_0: There is no significant relationship between PF and PTSD following defilement

   H_1: There is no significant relationship between PF and PTSD following defilement

4. H_0: PF will not moderate the relationship between PTSD and Health Functioning of victims of defilement

   H_1: PF will moderate the relationship between PTSD and Health Functioning of victims of defilement

Significance of the Study

The findings of this research will expand the knowledge on PTSD associated with defilement and how it affects the health of victims. Information on PF and its effect in the relationship between PTSD and health functioning will be made available. This study serves as a guide to health workers who deal directly with traumatised children and adolescent on the psychological management of PTSD following defilement. In addition, the

findings of this research will act as a source of evidence for the Ministry of Health and the Ministry of Gender, Children and Social Protection in the development of policies pertaining to child sexual abuse.

The result documenting the effect of defilement on the health of victims will serve as information for the general public.

Delimitations

Geographically, the study focused on victims of defilement within the greater Accra Region of Ghana. Also, the study concentrated on investigating the moderating role of PF on the relationship between PTSD and the health functioning of victims of defilement.

Limitations

Like any other study, this study was not free from challenges and limitations. Some of the respondents failed to show up during the COVID-19 outbreak.

Again a possible cause was locally focused literature inadequacy. Despite this, attempts were made to cover the void in the study's literature review in the examination of available literature in the local terrain. As far as generalizability is concerned, the analysis generalized only to victims of defilement in the greater Accra region and not any other region in Ghana.

Definition of Terms

According to the Webster Dictionary, definition of term is a word or phrase that in certain uses has a special meaning or is unique to a science, art, occupation, or subject. The following terms were specifically used to suit the study.

Defilement: Any form of sexual intercourse with a child from 8 to 15 years age, with or without the child consent.

Post-Traumatic Stress Disorder (PTSD): A psychological distress (re-experiencing, avoidance and hyper-arousal) that is experienced by a victim of defilement from the day of the occurrence or several days/weeks after the incident.

Psychological Flexibility: The capability of a victim of defilement to endure the emotional and mental pain following defilement such that there is less impact of the trauma on the health of the victim.

Health Functioning: The general health outcome of a victim of defilement following about their physical, mental, social and interpersonal relationship with others.

Organisation of the Study

This research is divided into five chapters. The second chapter discusses a review of related literature. The methodology chapter, which covers subjects like research design, population, sample and sampling processes, tools, data collection procedure, and data analysis procedure, is the third chapter. The results and discussion of the findings are reported in fourth chapter. Finally, in chapter five, the summary of the study, significant conclusions, and recommendations based on the study's findings are offered.

Chapter Summary

Chapter one dealt with the background to the study where the situation of defilement in the world, Africa, developed and developing countries and Ghana was introduced. The statement of the problem, which is, the inadequate literature on PTSD following defilement and health outcomes of victims and

how psychological flexibility can influence the relationship was discussed. It also focused on the various hypotheses and research questions guiding the study, the delimitations and limitations, operational definition of terms used in the work and the organisation of the rest of the work.

CHAPTER TWO

LITERATURE REVIEW

This aspect of the study is situated around scholarly works and theoretical perspectives concerning the influence of Psychological Flexibility in the connection between Posttraumatic Stress Disorder (PTSD) and health functioning of defilement victims. In this regard, the domain will be in three thematic areas. The first section looked at the theoretical framework. The second section focused on the conceptual review and the third part has empirical review from various studies according to the objectives of the study.

Theoretical Framework

The Rational Emotive Behaviour Therapy (REBT) theory of PTSD, the biopsychosocial model of health, and Acceptance and Commitment Therapy/Relational Framework Theory were all discussed in the theoretical section of the study (RFT). These models served as the foundation for the research.

Rational Emotive Behaviours Therapy (REBT) theory of PTSD

A significant number of victims of defilement have been shown to exhibit varying degrees of PTSD symptoms and may be subject to one-month post-trauma (Mutavi, Mathai, & Abonde, 2016; McTavish, Sverdlichenko, MacMillan, & Wekerle, 2019). This means that a number of victims of defilement may suffer from some sort of psychological distresses like PTSD that may have an adverse impact on their overall health. In addition, about 10% - 20% of these victims have been shown to have prolonged and debilitating PTSD symptoms that may impede activities of daily living (Noris, & Sloane, as cited in Woo & Sharma-Patel, 2019). In order to help victims of

defilement to recover, it is important to understand psychological processes that underlie post-trauma symptoms that can affect the overall health of the victims as well as identify key components in the psychological adjustment to trauma. In line with this, the concept of Rational Emotive Behaviour Therapy (REBT) theory of PTSD is explored in order to describe the nature of PTSD in its victims' skewed or irrational behaviours (iBs), by sometimes denying and engulfing the extreme pain of their traumatic experiences. There are several theories such as the Health Belief Model (Becker, 1974), Cognitive Behavioural Model (Clark & Ehlers, 2004), that could be used to explain in the development of Posttraumatic Stress Disorder (PTSD) and its impact on health functioning.

The REBT has a useful approach to dealing with mental health concerns, it was used in this study as a model for the treatment of post-traumatic stress disorder (PTSD). REBT asserts that it is not events that have a direct impact on one's feelings and behaviour. Rather the assumptions regarding the circumstances that contribute to emotional and behavioural reactivity are one's beliefs. So manifestations of any form of psychological distresses such as PTSD following trauma (defilement) may be dependent on the victim's beliefs prior to the event and not the event itself. Relatively speaking, the REBT model distinguishes between rational and illogical viewpoints, and claims that people react to disappointments with either healthy or unhealthy emotional and behavioural responses. Current research shows that irrational opinions lead to PTSD and a number of maladaptive behaviours that affect mental health. A mechanism to reduce irrational beliefs and promote realistic beliefs is also proposed by REBT. The theory is also

discussed to explain the growth of PTSD after defilement and how the theory can be applied to minimise irrational expectations associated with defilement.

By placing illogical and logical beliefs at its core, REBT distinguishes itself from other psychological theories, implying that individuals would respond to traumatic events with either healthy or dysfunctional emotional and behavioural reactions. REBT resulted in a substantial decline in trauma-specific irrational beliefs that led to anxiety in the lives of victims in trauma-specific circumstances such as PTSD (Eseadi et al., 2019).

Albert Ellis developed REBT in 1955, originally referring to it as Rational Therapy and Rational Emotional Therapy. REBT is a form of cognitive behavioural therapy. (Collard, & O'Kelly, 2011). REBT, however, differs from other approaches to cognitive behaviour by putting irrational and rational beliefs at its heart (Turner, 2016). The theory suggests that psychological distress encountered in conjunction with traumatic life events such as domestic violence (defilement) and natural disasters is a positive reaction and that a prolonged course of symptoms that interfere with everyday living behaviour can be ill-adapted (Woo & Sharma-Patel, 2019). The distinction between such emotional responses (which may be either rational or irrational) may be a result of one's pre-existing belief (developed from life experiences) of the world prior to the trauma and not as a direct result of the trauma.

In other words, variations in emotional responses (which may be either rational or irrational) may arise from one's pre-existing belief (developed from life experiences) of the world before the trauma and not as a direct result of the trauma. This is focused on Ellis' hypothesis that the world's preconceived

ideas established by interactions of life, are the basis of one's understanding of the universe, which can be changed to include different knowledge. Through extension, PTSD symptoms that may be seen in some victims following defilement may not necessarily be due to the effects of the abuse but may be due to the pre-existing perception of the victim before the defilement. (McTavish, Sverdlichenko, MacMillan, & Wekerle, 2019). Characteristics within-individual and early environmental conditions also, seem to be a contributing factor in the incidence of PTSD in children (Koenen, Moffitt, Poulton, Martin, & Caspi, 2007).

REBT theory further explains that many people see the world as "just," "healthy" or "important" hence traumatic encounters question the strength of these schemas (Ellis, 1995). In his view, Ellis (1994) posited that persons who have persistent symptoms of PTSD hold 'irrational convictions' consisting of 'demands' to be true to their pre-existing worldviews. Such individual often put excessive verdict on their (other's or the world's) value, coping capacity, or nature of the traumatic incident. For instance, victims of defilement who maintain the 'demand' that life must be absolutely equal' may assume that (1) individuals 'are worthless unless they will hurt you' (i.e. 'worth ratings'); (2) "they cannot contend that the world is unfair" (that is, "intolerance to frustration"); or (3) that it is "awful to live in an unfair atmosphere" (that is, "awfulizing"). Ellis (1994) further indicated that the symptoms can only be changed by modifying these 'internal unreasonable assumptions' (that is, "I'd like to see events played out equally, but I understand that things don't turn out the ways I think they are.").

However, victims with tough minds usually experience shock for a while, then try to bury the traumatic experiences and assure themselves that related incidents will possibly not ensue another time (Ellis, 1994). Subsequently, they adjust reasonably well, cultivate rational anxiety about the future, and only seldom recall and sense alarmed about their past traumas. Yet when they are provoked once more with reminiscences that convey vivid pictures of the distressing events they possibly will again be upset and may occasionally develop PTSD.

In addition, the theory further explains that trauma events typically prompt a meaning-making process to perceive evidence that sometimes contradicts an individual's pre-existing beliefs (Hollon & Garber, as cited in Woo & Sharma-Patel, 2019). People who experience prolonged symptoms of PTSD are primarily triggered by the demandingness of people by raising their strong desires for performance, acceptance, fairness, and comfort to absolutist demands and must-do, and thereby disturbing themselves when these criteria are not fulfilled. As such, they put undue judgement on the importance, willingness to deal with or seriousness of the traumatic incident (Ellis as cited in Woo, & Sharma-Patel, 2019). These people may also have one or more dysfunctional or irrational views. They therefore assume that they should be immune and never react negatively to traumatic situations, that they should have behaved differently through these events, that there must be a fair world, that life should be meaningful and understandable, and that in nearly all circumstances they should act well in order to accept themselves as good people.

According to REBT, irrational demands mostly operate on primary and secondary levels. A survivor of defilement can argue on the primary level that such an unfair occurrence should not have happened and that the world is an unjust and miserable place to live and that it should have been avoided, so she feels insufficient because she did not do anything to defend herself from being defiled (Woo & Sharma-Patel, 2019). These dysfunctional thoughts about the defilement, as well as the distressing event itself, will syndicate to make her feel appropriately worried and fearful as well as inappropriately traumatised and self-downing (Ellis, 1994). However, some of the victims, particularly when they are really distressed about the original activating encounter or adversity in their life, such as defilement or violence, tend to produce symptoms of tension or disturbance at the secondary level (Walen, DiGiuseppe, & Dryden, as cited in Ellis, 1994).

According to the theory, the victim will still be traumatised and feel very bad about the defilement. Nonetheless, if the victim does not insist that bad things such as defilement simply do not occur and that the victim should have avoided it and the victim does not appear to feel so devastated then the primary bad feelings will not produce secondary symptoms (Ellis, 1994). In order to alleviate these symptoms, Ellis suggested that victims must be assisted to change these irrational secondary beliefs (Ellis, 1994).

David, Lynn, and Ellis (2010), also described rational beliefs as cognitions (evaluative or appraisal) operates on logical, empirical support and pragmatic criteria. That is rational beliefs either meet at least one of the three criteria or a combination of the different types of these criteria. The authors further asserted that rational beliefs enhance adaptive coping with stressful

events, self-acceptance and also reduce vulnerability to psychological distress as well as playing an instrumental role in achieving valued goals. Many physicians and scholars of REBT have acknowledged this.

REBT theory was originally built on the traditional ABC model of emotional distress where letter A represent the event (activating event), the beliefs (either rational or irrational beliefs) are assigned the letter B, cognitive-emotional-behavioural-physiological consequences represented by C (Turner, 2016). That is, in our internal or external world, the adverse activation events encountered does produce cognitive-emotional-behavioural-physiological consequences but are as a result of our evaluative beliefs, in particular, irrational beliefs about these activating events (Hyland, Shevlin, Adamson, & Boduszek, 2014).

The ABC model is also known as the "ABCDE" model, with D standing for Dispute of Beliefs and E standing for New Effect, which is the result of good beliefs (Jorn, 2018). The expression 'belief' describes a belief in the facts, certainty, or integrity of something. Therefore a belief is a thought with an emotional (conviction) aspect and a rational (fact, certainty or legitimacy) component (Jorn, 2018). Beliefs too may be positive or pessimistic. It is not necessarily a bad thing to have a negative belief; however, when one believes in something that is wrong, a negative belief tends to become a "irrational belief. Irrational belief may not help satisfaction and contentment and is definitely obstructive in achieving one's basic needs in life for love and acceptance, relaxation and achievement or achievement in life" (Jorn, 2018).

Typically, the ABCDE paradigm operates by transforming irrational assumptions into realistic beliefs about causing events, resulting in stronger results and emotions (David, Szentagotai, Eva, & Macavei, 2005). According to the model, the individual may have justified or irrational beliefs (B) while an individual encounter an adverse triggering occurrence (A), which may result in cognitive-emotional-behavioural-physiological effects (C). Rational beliefs (RBs) have practical implications, whereas irrational beliefs (IBs) have unhealthy implications. If these consequences have been produced, events (A) could themselves be caused, producing secondary consequences by secondary RBs and IRBs. For a favourable effect on their social, cognitive, and behavioural reactions, REBT clients are urged to dispute (i.e. restructure) their IBs and assimilate more efficient (E) functional RBs (Ellis, 1994).

The theory has been practiced very successfully in assessing and managing children and adolescents who experience difficulty managing self-defeating emotions and behaviours. Hence it will also be applicable in this current study (Vernon, 2019; David, Oltean, & Cardoș, 2019).

REBT theory like any other theory is not without criticisms. For instance, REBT theory may not be applicable in the assessment and management of some categories of victims, such as those with ‘intellectual deficiencies’ and is therefore suggested to be an intellectualised method to treatment. For example, by using REBT therapeutic approach in management, clients with mental retardation and those with serious psychiatric conditions such as autism spectrum disorder due to the severity of both their cognitive and social skills might be exempted. These individuals may not be able to relate to the therapist at the level required (Mkangi, 2010). However, the

theory may also be applicable to children with less sophisticated reasoning ability.

Furthermore, Ellis suggestion about the logical analysis (A-B-C-D-E) in detecting and eliminating irrational beliefs gives little significance in peak-experience, revelations and spiritual experiences of the client. These virtues have been shown to increase self-understanding and as such, denial of their value will decrease the value of Rational-Emotive Treatment, rendering it more specialised and stringent than necessary (Morris, 2012).

In any case, however the hypothesis about the deeper causes of PTSD in the REBT theory is an important area to explore. The theory of REBT has been applied by many scholars in different research studies. Shackford (2015) looked at REBT and its application to adolescent suicides. The author applied REBT's five main elements and pointed out that suicide contemplation among adolescents are the product of irrational cognition. Eseadi et al (2019) investigated the impact of REBT on trauma-specific beliefs in undergraduate students. REBT resulted in a significant reduction in the trauma-specific delusional ideas of the students in the therapy group when compared to their counterparts in the waitlist control group, according to the findings.

Biopsychosocial Model of Health

George Engel developed the biopsychosocial paradigm in 1977 and provoked a revolution in medical thinking by offering an argument and logic that medicine is best related to science (George & Engel, 1980). No disease or even good health can be an expression of a biological condition alone, according to this model. For example, the cause of malaria or any other medically diagnosed diseases may be caused by a bite from anopheles

mosquito alone. Psychological variables and social variables surrounding a person, however, play an equally important role in either preserving or deteriorating health (Bolton & Gillett, 2019). This implies that PTSD, which may develop in some of the survivors of defilement may interact with the victim's biological and the person's socio-cultural environment to influence their general health functioning.

World Health Organisation (WHO) appears to agree with George and Engel (1980) view on the description of health. WHO describes health as not just the absence of illness or infirmity, but the overall state of health at the biological, psychological and social levels (WHO, 2010). Consequently, all variables identified by the WHO as a component of health need to be explored when assessing the health status of victims following defilement since an early traumatic experience such as defilement has been shown to have a significant impact on the functioning of children's mental, behavioural, cognitive, social and physical wellbeing (Perry et al., as cited in Coates, 2010). For instance, an injury to the vagina (resulting from painful penetration during an act of defilement) induces a transition in the biological dynamic. Not only can the injury change to compensate for the biological immune and muscle systems that respond to the injuries sustained alone but interpersonal interactions can also be changed. Interpersonal improvements can arise as the use of another provides guidance and relaxation, even as interpersonal complexities demand an understanding of the causes and effects of the harm. Therefore as result, to adequately examine and treat victims of defilement, a multidisciplinary approach may be endorsed. This current research, in line with this, adopts the

biopsychosocial model to test the influence of defilement on the overall function of victims' welfare.

The 'bio' component of the biopsychosocial theory captures the physical or the physiological element of the body that affects and determines health. Structures such as brain modifications, anatomy, or the operation of large body organs such as the liver, kidneys, or motor system, are included in this (Lehman, David, & Gruber, 2017). The immunological and cardiovascular systems are necessary for overall body health, and neurological systems like the limbic system are vital to understanding how psychological and physical domains influence health. Each of these structures is made up of a complex, interrelated system of systems and cells (Lehman, David, & Gruber, 2017).

Research has shown that defilement can have a negative effect on both the physical and physiological functioning of the survivors. For instance, acute physical injuries to the genital area (sustained through forceful penetration), increased BMI as well as medically unexplained symptoms such as nonepileptic seizures and chronic pain have been identified as some of the health outcomes of child sexual abuse on the victim's physical health. Such physical health problems affect areas of functioning as well as leading to long-standing illness or disability and this can reduce the quality of life (Fisher, Goldsmith, Hurcombe, & Soares, 2017).

In addition, the occurrence of a painful, traumatic event such as defilement can lead to changes in the nervous system, hormones and immune system in the way the body regulates itself, which can influence the development of the brain. In turn, such brain changes may make certain people more susceptible to potential stress and raise their risk of a variety of adverse

health consequences (Coates, 2010). Other physical health issues associated with defilements may include obesity, accelerated pubertal development, healthcare utilisation, gynaecological problems, sleep problems, preterm delivery (Trickett, Noll, & Putnam, 2011).

The 'psycho' includes a cognitive, emotional, attitudinal, motivational and behavioural aspect of human health. Research indicates that any disturbance in early brain development will affect a variety of fundamental psychological and physiological functions since the form in which the brain is structured is influenced by developmental experiences (Fisher, Goldsmith, Hurcombe, & Soares, 2017). As a result, structures in the brain that controls psychological health may be negatively affected. For instance, the limbic system mainly comprises the amygdala and the hippocampus, which is responsible for emotional regulations and memories, showed some functional abnormalities following sexual abuse. Similarly, the development of PTSD has been linked to decreased volumes of hippocampal volumes (Coates, 2010).

This development could account for some of the negative emotional wellbeing (low self-esteem and loss of confidence) that victims of defilement may experience. They may also show other negative mental health symptoms/outcomes which include depression, anxiety disorders, PTSD, suicide and self-harm, as well as a host of other mental health problems. This development may interfere with academic functions of victims their capacity to build and/or retain productive relations with anyone (Fisher, Goldsmith, Hurcombe, & Soares, 2017).

On the other hand, psychological factors can further exacerbate a genetic disposition by placing a person at risk for other inherited dangerous

behaviours. For instance, PTSD or depression itself may not cause liver problems, but a person with PTSD or depression may be more likely to drink alcohol and suffer liver damage as a consequence. Increased risk-taking leads to an increased chance of illness (Boundless, 2015).

Socioeconomic status, community, technology, and religion are social influences. For example, losing faith in a person least expected to be the culprit of the defilement or losing a non-offending career may also make one vulnerable to stress and disease. Such life experiences can lead a person to experience depression, which can in turn lead to issues with physical health (Boundless, 2015).

Furthermore, it has been shown that defilement has disastrous effects on interpersonal relationships, and this could transmit extensively from childhood to adulthood (Fisher, Goldsmith, Hurcombe, & Soares, 2017). As far as the effect on childhood interpersonal interactions is concerned, a survey of child victims of sexual harassment identified a portion of the challenges young children and teenagers have to face, including the commitment they would need to feel for changes in family structures and well-being of family members, as well as interference with peer groups and being intimidated by friends (Warrington, Beckett, Ackerley, Walker, & Allnock, 2017).

When negative connotations of violence (badness, shame, guilt) are consistently transmitted to the child (drug abuse, prostitution), it can contribute to low self-esteem, self-injurious behaviour, thoughts of suicide, and suicidal ideas, and affiliation with other stigmatized activities. In addition, when the child learns out someone the child trusted and relied on caused him/her harm, it may lead to disappointment and depression, resentment, and

distrust of others (Cantón-Cortés, Cortés, & Cantón, 2012). The level of social services offered to victims of defilement has been found to have been instrumental in reducing the impact of defilement on mental health (Parent-Boursier & Herbert, 2015).

A significant relation to make here is that all the functions of the Biopsychosocial version are related. Biology can have an effect on psychology, which can have an effect on social well-being, which could similarly affect biology, and so on (Parent-Boursier & Herbert, 2015). This means that just like the broader picture of psychological problems and the influence society has on that character and its situation, the theory takes into account the smaller image of any biological issues of an individual level.

Consequently, when analysing an affected victim, this model takes both small-scale and large-scale viewpoints into account. Thus the result of the BPS version is that in a variety of perspectives and studies it looks at health and disorder how the interaction of various factors contributes to specific problems for a person (Frazier, 2020). To efficaciously examine the health functioning of sufferers of defilement affected by PTSD or any psychological disorder, the assessor may additionally need to incorporate all the components of the model to achieve successful results for an accurate diagnosis and management (Frazier, 2020).

In addition, wellbeing is not considered by the biopsychosocial model to be a deviation from any constant physiological state. Instead as a result of social, psychological and biological influences working together it focuses on health and disease (Frazier, 2020). By implication, a further probe must be conducted with victims of defilement, who may psychologically appear fit

with some minor physical injuries on examination. Therefore the medical method must not only treat health from a physiological point of view, but focus on balanced all-round development, cure and preservation of all three variables (Frazier, 2020).

Another preferred position of the biopsychosocial paradigm is that the psychiatric specialists are not completely in charge of cure, rehabilitation, and good health, the patients themselves are fully in charge of their own health (Bolton & Gillett, 2019). Patients and their families should sustain a mind-set alongside health specialists coping with biological care that can lead to rapid mental and social rehabilitation, which will ultimately help enhance and speed up physiological/biological recovery (Bolton & Gillett, 2019).

Patients feel weak or irrational once in a while utilising this therapeutic approach. Because the biopsychosocial paradigm does not understand that illnesses and ailments are caused simply by infections or microscopic organisms, stronger psychological conditions and enhanced social association are progressed. It also supports social support, encouraging the promotion in the public eye of network-based living. In line with this definition, family members are often involved during the evaluation processes, as well as significant others (Bolton, & Gillett, 2019).

The model often takes into account the effect of culture on a person, including his or her religious beliefs, social support, the family structure, and past events (Kontos, 2011). Nevertheless when attempting to investigate a health problem, it may become very impractical to take too many social variables into account. As it can be difficult to select which social factors may be contributing to the health problem. This may delay the assessment process

as the assessor will have to take into considerations so many social or environmental variables (Kontos, 2011).

One weakness of the biopsychosocial model is that new users may find it difficult to effectively and properly utilise the model. This is because the paradigm appears to imply that two different fields of medicine are psychology and biology. This creates incorrect expectations of new users, who do not distinguish what symptom the patient should identify as a psychological or biological factor (McLaren, 1998). Although the biopsychosocial model has weaknesses, the model may be exceptionally valuable in some circumstances.

Relational frame Theory/Acceptance and Commitment Therapy

Acceptance and commitment therapy (ACT) is a distinct therapeutic strategy based on scientific foundations that uses methods of acceptance and understanding, as well as approaches for commitment and behaviour change, to promote PF, according to Flaxman, Blackledge, and Bond (2011). Thus, ACT is based on the idea that suffering is a natural and inevitable occurrence for human beings, but, that does not imply we must not give up and leave ourselves to suffer. ACT additionally holds the idea that a number of the sufferings we endure makes no sense and one even harmful to our psychological wellbeing, and applies relational frame theory to altering and removing the thinking and language pattern we have that make contributions to suffering. ACT offers strategies to assist clients to stop trying to avoid or control their very own emotions and learn how to admit their internal experiences and direct their strength in the direction of actual solutions to their worries (Ackerman, 2019).

In Relational Frame Theory, ACT is deeply rooted in (RFT). Relational Frame Theory (RFT) is a language analytical methodology aimed at better understanding the relation between human language and behaviour in the production and maintenance of psychological disorders (Tyndall, Mulhern, Ashcroft, & McLoughlin, 2019). Thus the RFT claims that such language relationships contribute to the creation of misery or the creation of most psychological issues. As a result of RFT, the danger of repression and conflict, the need of cognitive diffusion and experiential acceptance, the meaning of some "self" senses and the centrality of values are all highlighted, among other things (Hayes, 2016).In the ACT's approach to solving problems, both of these were prominent.

The ACT/RFT model provides a perspective to view the creation of psychological distress through it. Psychopathology is caused by the way language and cognition communicate with direct contingencies to establish an inability to persist or interchange activities in the service of long-term desired purposes, according to an ACT/RFT perspective (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

Humans undergo suffering, trauma, and loss, according to an ACT/RFT definition of psychopathology, and these stories are part of a lifestyle. However, suffering occurs via the interaction of language systems with direct contingencies that create an obstructive and uncommon emphasis on dealing with or mitigating the pain that prevents involvement in actions closer to valued domains (Coyne, McHugh, & Martinez, 2011). Psychological inflexibility is a term used to describe this phenomenon, which is attributed to the mechanism of associative learning being weakened by bad, irrelevant

environmental input. The ACT psychopathology model is therefore closely linked to the methods described by the RFT system (Coyne, McHugh, & Martinez).

Accumulation of cognitive and experiential avoidance, attachment to the conceived self, avoidant persistence, and a lack of value clarity and inadequate self-awareness are all part of the ACT/RFT psychopathology paradigm (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). One of these behavioural strategies is cognitive fusion and experiential avoidance, which contribute to the development of most symptoms in psychopathology (Hayes, Strosahl, & Wilson, 2012).

The act of emphasising the material content of thoughts such that people rely on the material content of their thinking that is congruent with an external reality is termed as cognitive fusion by the scientific community. In other words, cognitive fusion is the process of assigning meaning to the content of thoughts, such that individuals believe that their content of thinking is compatible with external occurrences (Strosahl, Hayes, Wilson, & Gifford, 2004). That is the propensity to accept the thoughts and opinions of one's own as literal and valid. For example, the thought, "I am a loser," could be perceived by a victim of defilement who misperceives an accidental mild as having adversarial intent as a right mirrored picture of his or her personal self-esteem.

The individual behaviour is directed more by distinct inflexible verbal networks in perspectives that foster such fusion than by contacting environmental contingencies. Consequently, the individual may also behave in a manner that is uneven, with what the environment provides relevant to the

values and objectives chosen. Since humans are said to show inflexible behavioural habits after treating their minds as literal, cognitive fusion is problematic (Eifert, & Forsyth as cited in Jones, 2016). However from the ACT/RFT point of view, the form or substance of cognition is not explicitly problematic, unless contextual factors allow this cognitive structure to control people's behaviours in unhelpful ways (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

It is also possible to apply the model of mental illness to the development of symptoms of post-traumatic stress disorder. (Hayes, Strosahl, & Wilson, 2012). There is a probability that cognitive fusion affects the relationships of people with their trauma-related feelings, such that the thoughts help to show the existence of the upsetting incident (Blackledge, 2004). That is, people with symptoms of PTSD can be so fused with the subject material of their minds that they behave as if literal truths represent the thoughts of the intrusions.

For example, victims of defilement who experience symptoms of PTSD might have photos in their heads of their abusers and then react to the pictures by performing safety behaviours intended to protect themselves from actual and current safety risks, like checking to ensure that their doorways are secured, arming themselves with pepper spray, or stooping at the back of a bit of furnishings. Unconscious reactions include increased breathing rate, high blood pressure, and electrical skin conductance. These victims are less able to focus on the contextual characteristics of the images that include the rooms they are in while images arrive in their minds, what they were doing before the images appeared and how consistent their breath is when responding to them.

(Jones, 2016). Consequently, the overall health status of these victims can also deteriorate.

Cognitive defusion is an alternative to cognitive fusion, which is one of ACT's goals. It refers to the process through which a person realises that their thoughts are only word events rather than actual happenings. ACT aims to alter the meaning and purpose of one's thinking by altering how an individual interacts with them. Some of these tasks may be reduced if neural arousal or emotional distresses are correlated with these cognitions (Coyne, McHugh, & Martinez, 2011).

Furthermore, the majority of victims who experience cognitive fusion make some efforts to deal with disturbing thoughts (Hayes, Strosahl, & Wilson, 2012). Experiential avoidance can result from the propensity to adjust, modify, mitigate, escape from unpleasant thoughts, memories and feelings, or otherwise regulate undesirable psychological experiences. In the ACT/RFT model, this is the second behavioural mechanism presented (Hayes, Strosahl, & Wilson, 2012). Experiential avoidance often causes a rise in the duration and intensity of inhibited internal stimuli and a reduction in behaviour (Jones, 2016).

Experiential avoidance in itself may not be a problem when used in limited doses without undue personal costs, For instance, a victim of defilement who uses the distraction to help concentrate in class may benefit from this approach. However, the development of ranges of maladaptive behavioural occurs when the victim demonstrates the extreme reliance on managing the avoidance experiences (Coyne, McHugh, & Martinez, 2011). The explanation is that special emphasis on experiential avoidance draws

internal focus to the objectives of coping with uncontrollable emotional experiences, hence obstructing attention to those more important goals. As a result, avoidant behaviours are assumed to create suffering, or general psychopathology (Blackledge & Barnes- Holmes, as cited in Jones, 2016).

In addition, the expression of efforts to monitor, stop and/or suppress aversive private events may be said to have psychological and behavioural difficulties. Consequently, symptoms of PTSD (i.e. re-experiencing, avoidance and emotional numbness and hyperarousal) experienced by certain victims of defilement may be due to the mechanism of experiential avoidance (Marx, & Sloan, 2005).

Furthermore, research have indicated that experience avoidance has a significant role in the generation and maintenance of psychological disorders among trauma survivors, such as defilement victims (Tull & Roemer, 2003; Marx & Sloan, 2005). In a study of female sexual assault survivors, Tull and Roemer (2003) discovered that experiential avoidance accounted for a significant percentage of the heterogeneity in PTSD symptomatology. Marx and Sloan (2005) also tested the hypothesis that experience avoidance and emotional expressiveness can alter the link between a history of childhood sexual abuse (CSA) and psychological suffering in undergraduate students. They discovered that the only variable that mediated the association between CSA status and discomfort was experiential avoidance. For a significant percentage of trauma patients, preventing and monitoring private interactions may be a common purpose because they may not be able to experience those effects, feelings, perceptions, and stimuli.

Experiential avoidance leads to an increase in the frequency and intensity of distressing feelings, and these two conceptions are often diametrically opposed. Conversely, the ACT/RFT model indicates that the relationship between the action and the evaded stimulus is enhanced by mixing them together when individuals participate in behaviours of experiential avoidance (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

The ACT/RFT model on the other hand, suggests that relationship between stimuli is bidirectional, which means that the presence of one stimulus, or at least the other's functions, will invoke the other (Hayes, 2006). For instance, the picture of a victim's appearance in the mind of a survivor of defilement can initially be purposely related with an irritated disposition and behaviour to overshadow the image. Later, the survivor listens to the radio and sees the disturbing sight of the offender. The image is then paired with the music that was playing on the radio, so the distracting image would be brought back to mind by listening to the song.

The cardinal signs of PTSD are evidently the avoidance of different stimuli and circumstances and mental numbing (American Psychiatric Association, 2000). The hypothesized association between experiential avoidance, cognitive fusion and PTSD may also support the scope of avoidance behaviours and their role in trauma-related problems. The strategy of nonjudgmentally and voluntarily contacting the present moment is the equivalent of experiential avoidance, experiential acceptance (Hayes, Strosahl, & Wilson, 1999).

Psychological flexibility has emerged as an effective moderator of the relation of PTSD and pain interference. Individuals with PTSD experienced

higher levels of pain in conjunction with low psychological flexibility and vice versa following a traumatic event (Waldeck, Tyndall, Riva, & Chmiel, 2017).

ACT's main purpose is to nurture psychological flexibility so that people can achieve aims in essential or respected areas of life (Coyne, McHugh, & Martinez, 2011). ACT focuses on experiential avoidance and cognitive fusion as harmful mechanisms and encourages people to participate in behavioural valuation (Coyne, McHugh, & Martinez, 2011). Therefore, empirical study is required to discover the implied theoretical relation between PTSD, psychological flexibility and the functioning of victims of defilement in general health.

Conceptual Review

The conceptual review provides information on the various concepts under study. It considers definitional issues and explanation, characteristics, causes and risk factors, effects, and treatment and management of health conditions where applicable, and also explains the main variables in the study.

Defilement

Nature and Prevalence

Defilement is defined as the involvement of a child in any sexual act that he or she does not fully appreciate, for which he or she is unable to offer informed consent, or for which the child is not ready for and cannot give consent, or that violates laws or social taboos (WHO, 1999).

Defilement, one sort of child sexual exploitation, is defined under the Criminal Offences Act of 1960 as the usual or unusual sexual penetration of a child under the age of 16 without or even with the child's agreement (Act 29). Natural carnal knowledge therefore is sexual intercourse involving penetration

of the penis into the vagina, whereas unnatural carnal knowledge includes unnatural sexual intercourse with a human or with an animal (Section 99 of the Criminal Code).

Unlike rape, in line with segment 14(a) of Act 29 consent for a carnal understanding of a child below 16 years is annulled. Anyone who defiles a child commits a crime and faces a sentence of not less than seven years in prison and not more than 25 years in prison if found guilty on summary judgement (Criminal Offences Act-1960). This portion of the law is put in place to protect children against crime, neglect and violence and is consistent with global treaties on child safety, such as the United Nations Convention on the Rights of the Child (UNCRC), since Ghana was the very first country in the world to enact the Agreement on the Child's rights and is a member to a variety of other international laws on the protection of children.

Defilement is gendered, with girls typically reporting two to three times higher than boys, and prevalence rates vary widely, due to conceptual and methodological discrepancies even within nations (Radford, Richardson-foster, Barter, & Stanley, 2017). According to the World Health Organization, approximately 73 and 150 million boys and girls, respectively, are exposed to various forms of defilement, and one in five women and one in thirteen men were sexually assaulted as children (WHO, as cited by Ebuenyi, Chikezie, & Dariah, 2018). Defilement can take place in several types, as contact is not necessarily involved and can take place in various environments.

Defilement includes situations in which a child is sexually abused by a family or caregiver at home or by a total stranger in a position outside the home. Other times, the child is forced to sell sex in exchange for food, money,

or gifts, sexually assaulted by an adult, gang, or peer living within the community on the way to or from school, groomed by an older male on the internet and enticed into pornographic acts, sodomy, exhibitionism, or indecent photos, or confined to sexual slavery by coordinated child sex abuser companies (Radford et al, 2017).

Effects of Defilement

The consequence of defilement ranges from individual to individual and from case to case and has an impact on the healthy growth, physical and mental health of children. Inside and outside of the body, fractures (including cuts, tears, excessive bleeding and damage to internal reproductive organs, often requiring surgery), early or unintentional as well as complications in pregnancy, sexually transmitted diseases (HIV and AIDS), obesity are some of the physical negative effects (Radford et al, 2017).

Self-blame, humiliation, mistrust, remorse, depression, anxiety and panic disorders, PTSD, self-harm and suicidal thoughts, bulimia or anorexia, dissociation and death can be psychological damage to victims (Radford et al, 2017). The psychological and emotional effects of child sexual exploitation can be particularly damaging because the surrounding confidentiality, disgrace, and stigma ensures that many children can cope with maturity by themselves in the course of life (Radford et al., 2017).

Posttraumatic Stress Disorder (PTSD)

PTSD is an emotional syndrome that occurs after a traumatic episode (either a single isolated occurrence or more chronic and repeated traumatic experiences) is experienced and associated symptoms may cause clinically relevant depression or disability in the social relationships, capacity to work,

or other important functional areas of the individual (Weathers, 2017). Further consideration is given to the clinical symptoms associated with DSM-5 PTSD and four different diagnostic classes are suggested with DSM-4 instead of three. Re-experiencing, avoidance, depressive mood and awareness, and arousal are classified (Pai, Suris, & North, 2017).

Incidence

People who have undergone interpersonal trauma, such as rape or child abuse, are more prone to acquire PTSD than those who have encountered non-assault-based trauma, such as injuries and natural catastrophes. Also, around half of people experience PTSD after abuse (Bisson, Cosgrove, Lewis, & Robert, 2015; Zoladz, & Diamond, 2013). PSTD in children following a tragedy is a normal phenomenon. While others can recover immediately from an injury, one month after the incident, some show symptoms. Age may have a role in the development of PTSD because older children are more prone to get the disorder than younger ones (Charnsil & Chailangkarn, 2020).

Risk factors and causes of PTSD

Risk factors associated with PTSD in children can be grouped into several clusters, thus, the characteristics of the trauma, the child, and family, as well as responses to the traumatic event. According to McLaughlin, Brent, and Hermann (2018), the following are some risk factors which could predispose a child to developing PTSD:

1. Trauma characteristics: The likelihood of getting post-traumatic stress disorder (PTSD) varies greatly depending on the nature of the traumatic incident. Events such as natural catastrophes, car accidents, and incidents involving interpersonal violence, such as rape and sexual

assault, which affect children. Moreover, children who encounter a larger amount of traumatic experiences are more likely to develop PTSD than others who suffer a single trauma.

2. Child characteristics: Females are up to three times more likely than males to suffer from PTSD. Trauma exposure is more likely to intensify PTSD symptoms in children who have a history of intellectual impairments rather than those who do not.
3. Family characteristics: A terrible own family functioning and parent reactions to trauma are related to PTSD of their kids uncovered to trauma. Children with additional social support are far less likely than those without such a guide to develop PTSD.

Signs and Symptoms

The following signs and symptoms were listed by McLaughlin, Brent, & Hermann, (2018):

1. Intrusive symptoms: Intrusive and distressing mind, (they arise while the child does no longer want to reflect on consideration on the annoying event) about the traumatic event are commonplace in children with PTSD. In younger children, the intrusive mind may be observed in repetitive play in which information of the demanding occasion is acted out or trauma issues (for example, someone being harm) are expressed.
2. Upsetting dreams and nightmares not closely associated to the traumatic event are common in children with PTSD. In children with PTSD, persistent nightmares can lead to sleep difficulties as a result of fearful waking during or after the dream.

3. Avoidance symptoms frequently broaden in response to distressing and uncontrollable re-experiencing signs and symptoms. This is expressed in two approaches as a consequence, avoidance of thoughts, feelings, and recollections of the traumatic occasion (that is, internal reminders) and avoidance of human beings, places, and sports-related to the annoying occasion (that is, outside reminders). In younger children, avoidance can appear as constrained play or reduced exploration in their environment.
4. Sleep problems are common in children with PTSD. This may involve difficulty falling asleep, staying asleep, or trouble falling back to sleep after disturbing dreams. Young children may be fearful of sleeping on their own, even though they did not show this behaviour before the traumatic incident.
5. Children may exhibit extended arousal and emotional reactivity. Children may additionally show irritability, have anger outbursts, or grow to be physically aggressive in the direction of others more often than changed into traditional for them earlier than the annoying occasion. In youngsters it is common extreme mood tantrums to emerge.

Management of PTSD

1. Psychotherapy, or “talk therapy,” for the child
2. Psychotherapy for the family
3. In some cases, a combination of therapy and medication

Prognosis

Depending on a number of factors, prognosis varies, including endurance, secondary stresses, support level, past traumatic events, current injury, severity of stressor, among others. The durability of the child is a major factor in forecasting (Gore, 2018).

Psychological Flexibility (PF)

The principle of PF is the ability to remain in touch with the present moment or inner experiences, enable them to be there when helpful, see thoughts as just thoughts, have a clear sense of direction in life, and do things that are meaningful (Kashdan & Rottenberg, 2010). Thus the capacity to pursue valued life purposes in spite of pain.

In other words, PF is the capacity to be present in current situations (including uncomfortable thoughts and feelings) and to embrace them as part of a rich and meaningful life. This understanding is important because research shows that attempting to get rid of our difficult thoughts and feelings increases their frequency, intensity and length (Wenzlaff & Wegner, 2000). This means that rather than focusing on ways to alleviate unpleasant symptoms, theory and research recommend focusing on ways to encourage healthy living choices, such as allowing room for unpleasant feelings or physical sensations (Fredrickson, 2001).

Acceptance and Commitment Therapy (ACT) is enhanced by PF, allowing patients to focus more deeply on the present moment and engage in or persist in behaviour that is beneficial to them (Hayes, 2006). The concept has extensively been studied in adult population and less in younger population. On the other hand, the few studies in children population have

indicated the presence of PF is beneficial in increasing the psychological health of children with psychological distresses (Tayebi Naieni, Mohammad-Khani, Akbari, & Abedi, 2017). Although the presence of psychological flexibility in children has been documented, general PF in male was found to be higher than the psychological flexibility of female (Alrefi, Nurihsan, Rusmana, & Nurhudaya, 2020).

Health Functioning

Health functioning, according to WHO (2010), is defined as the ability to carry out all of one's everyday activities. The International Classification of Functioning, Disability, and Health (ICF) measures an individual's ability to function in six areas of life: (i) cognition (understanding and communication); (ii) mobility (ability to move and get around); (iii) self-care (ability to take care of personal hygiene, dressing and eating, and living alone); (iv) getting along (ability to communicate with others); and (v) life tasks (ability to perform responsibilities at home, work, and school) (ability to participate in community, civil and recreational activities).

Consequently, difficulty in performing, or requiring assistance from another to perform, one or more activities in any of the domains is described as functional health disability (WHO, 2010).

Conceptual Framework

The conceptual frame work for this study explains how the variables in the study are related and connected to each other. The predictor variable in the study is PTSD while Health functioning is the outcome variable. PF is not a main variable in this study but literature suggests that it can have an influence on PTSD and Health functioning. Thus it has been built into this study as a

moderator variable. Moderation means an interaction effect, where the direction or magnitude of the relationship between two variables is modified by the introduction of a moderating variable. Therefore the moderation effect of PF might increase (where an increase in PF would increase the health functioning effect of PTSD); buffer (where an increase in PF would decrease the health functioning effect of PTSD); or antagonise (where an increase in Psychological flexibility would reverse the effect of the PTSD on health functioning).

The conceptual framework is depicted in Figure 1.

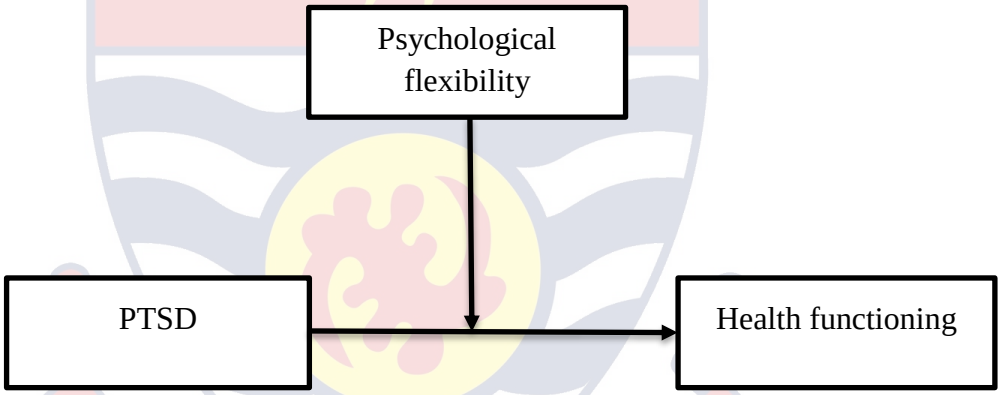

Figure 1: Proposed relationship between PTSD and Health functioning, with Psychological flexibility as a moderator

Empirical Review

This aspect of the literature reviewed detailed empirical studies on the respective objectives of the study. Issues concerning the occurrence of PTSD in victims of defilement, their health functioning, level of psychological flexibility, the link between PTSD and health functioning as well as the influence of psychological flexibility on the relationship are reviewed.

Global Perspectives

PTSD development as a result of child sexual abuse has been validated by a slew of scientific investigations. Rodriguez, Ryan, Vande Kemp, and Foy (1997) conducted a study comparing symptoms of PTSD in a group of 45 adult women in outpatient treatment for Childhood Sexual Abuse (CSA) and a group of 31 women who had no CSA. They analysed the traumatic consequences (both childhood sexual and physical violence) of dual assault. Results of the study found that in line with the Diagnostic and Statistical Manual of Psychiatric Disorders, 86.7% of the CSA group fulfilled the criteria for current PTSD compared with 19.4% of the partnership trauma group, providing support for CSA as an etiological agent for PTSD. In the opposite, the group who exhibited PTSD symptoms in adulthood may have experienced some other adverse experiences in the course of life which may have compensated for the existence of PTSD other than the CSA. However by inference from the results of the trials, detrimental influence of PTSD may have negative effects from childhood through to adulthood.

Another study conducted in Norway by Steine et al. (2017) examined longitudinal PTSD trajectories and found predictors of PTSD-trajectory participation in a Norwegian sample of adults who had experienced sexual assault since youth. The participants were 138 childhood sexual assault survivors (96.4 percent females, mean age = 42.9 years, mean age at first abuse = 5.9 years), who were recruited from sexual abuse counselling centres. The greatest overall match was established for a model comprising two PTSD trajectories, one with subclinical and dropping PTSD (54.9%) and the other with a high and moderately decreasing PTSD level (45.1%). Improved odds of

belonging to the path of clinical type symptoms are established for those who reported greater levels of vulnerability to other types of childhood violence (OR =3.69, p=0.002), sexual abuse caused by physical attack (OR =3.04, p=0.003) or threats (OR =2.56, p =0.014), exceedingly traumatic sexual abuse (OR =2.73, p =0.007), or who had experienced extreme trauma, powerless =0.007). Those on the PTSD subclinical trajectory reported less social support and greater interpersonal difficulties than those on the PTSD clinical path.

Other forms of psychological trauma may coexist with PTSD. McLean, Morris, Conklin, Jayawickreme, and Foa (2014) investigated the relationship between the characteristics of childhood sexual abuse (CSA) and the prevalence of subsequent Post-Traumatic Stress Disorder (PTSD), depression, suicidal ideation, and substance use in a survey of 83 female teenagers aged 18 receiving PTSD treatment. The findings demonstrate that nearly two-thirds of the participants (60.7%, n=51) thought the CSA was a relative. A considerable percentage of the participants (40.5%, n=34) said they had been victimised once, while around a quarter (23.8%t, n=20) said they had been victimised multiple times. Suicidal ideation and opioid use were at modest levels, with PTSD and depression ratings in the clinical category. The prevalence of PTSD, depressive symptoms, and substance addiction were not associated to CSA features such as trauma type, abuser connection, or duration of assault.

The prevalence of PTSD in both males and females was considered in a study conducted in Pakistan by Ashraf, Niazi, Masood and Malik (2019), while most studies on child sexual exploitation concentrate more on the female population. The study's purpose was to determine gender differences in

aggression, as well as the frequency and cross-association of aggression and symptoms of Post-Traumatic Stress Disorder in school-aged teenagers. The outcome showed that male respondents registered substantially higher harassment than female adolescents. However in the physical and mental sub-scales of aggression, women ranked slightly higher than males. There were no significant variations in the occurrence of sexual harassment between men and women. The link between child maltreatment and post-traumatic stress disorder symptoms was particularly strong, as those who had experienced more abuse also had more post-traumatic stress disorder symptoms.

While some people stay asymptomatic, empirical data has shown that child sexual exploitation has a negative impact on social, physical, psychological/emotional, and sexual functioning later in life. Sigurdardottir and Halldorsdottir (2018), for example, looked at a female CSA survivor's direct experience of the physical health impacts of the disease and how she dealt with healthcare providers' reactions. When Anne was a small child (two or three years old), her father began sexually harassing her. She has had difficult and serious physical health problems since she was a youngster, including regular genital and stomach infections, substantial and persistent discomfort, sleep disturbances, gastrointestinal problems, repeated back problems, fibromyalgia, excessive adhesions, and ovarian cancer. Anne's situation, although special, may raise related problems for other female CSA survivors.

In addition, a study was conducted in Kenya by Mutavi, Mathai and Obondo (2017) to explore psychosocial outcomes in defiled children and the impressions of child exploitation by their caregivers after defilement. Male

adults were the participants of the act and two of the babies defiled were males and five were females. The children were related to each other (a brother and his sister). There were five identified culprits; one of them was the infant's mother. Defiled children had a detrimental influence on their academic performance, self-esteem, sadness, and social interactions, according to the study findings. Additionally, one girl contracted HIV/AIDS, two became breastfeeding, one related to cocaine sales, and another had mental retardation. Caregivers felt major psychosocial anxiety.

Similarly, Mutavi (2018) followed a longitudinal study design using a mixed methodology to examine the psychosocial results of child sexual violence seen in Kenyatta National Hospital's Gender Related Violence Recovery Centre and Nairobi Women's Mental Health Department. He sampled 205 children aged 7-17 with a history of sexual harassment, selecting six parents/legal guardians for qualitative narratives. It was found that 95.3% of participants in the study had full PTSD, 4.7% had partial PTSD, 95% of participants had complete PTSD, 95% of participants had partial PTSD, and 95% of participants had complete PTSD. In the aftermath of sexual harassment, children's school performance deteriorated, although it improved in subsequent follow-ups.

Likewise, Jacobs-Kayam and Lev-Wiesel (2019) executed a study in Israel to clarify the functions of time perspective, space disorientation, and memory loss for CSA survivors. The authors followed a qualitative approach and the main strategy was to use open-ended life-story interviews. Fifty participants were chosen, randomly interviewed. The results revealed that CSA survivors are drifting in space and time without anchor, deprived of

positive past memories, before violence. Additionally, some of the participants were constantly chained despite their will to painful experiences, and a number of victims reported memories of the fragmented length of abuse.

Similar studies were conducted in North America by Rivera-Vélez, González-Viruet, Martnez-Taboas, and Pérez-Mojica (2014), who compared the memory, attention/concentration, and executive functioning of 12 women with child sexual abuse records to a control group of 12 women who had never been abused as children. Participants performed a neuropsychological study battery as well as a number of measures to assess PTSD and dissociation. The results show that the child sexual abuse group performed worse on long and short-term visual and verbal memory than the control group, as well as having less ability to do executive tasks. Working in these areas was linked to a lower risk of post-traumatic stress disorder and dissociative symptoms.

Murat et al. (2015) investigated the psychological effects of sexual abuse and its related causes in children and teens referred to the child and adolescent psychiatric clinic from official medico-legal institutions in Turkey. According to the study's findings, abuse-related mental diagnoses were made in 77.6 percent of instances (in which 45.9 percent were major depressive disorder and 31.7 percent were cases of post-traumatic stress disorder). Psychiatric diseases had a substantial link with the incidence of violence (for example, intercourse), despite the fact that the prevalence of specific psychological conditions was not significantly associated with gender or age.

Mbaluka (2019) conducted a cross-sectional study in Makueni County to investigate the impact of sexual assault on youth self-esteem. According to the findings, incest (39%) was the most common kind of sexual assault,

followed by defilement (27%), oral sex (25%), and other forms of sexual violence (9%). The study also discovered that girls are stigmatised by their family, friends, and the wider public, leading to PTSD, melancholy, suicidal thoughts, and anxiety in the majority of circumstances. Both have a negative impact on females' self-esteem, implying a lack of worth.

Psychological flexibility was discovered to be important in dealing with pain during a stressful event. The concept that baby and parental PF are resilience variables for child adaptive functioning was investigated by Beeckman et al. (2019). They also looked at the differences between general Psychological Flexibility and pain-specific Psychological Flexibility in terms of child outcomes. The researchers took samples from 59 children with juvenile idiopathic arthritis (JIA) ranging in age from 8 to 18 years old, as well as 48 adults (one parent). Various regression analyses revealed that infants with PF had greater psychosocial functioning and fewer negative consequences. Acceptance of infant pain resulted in improved psychosocial coping, lower impairment levels, and fewer negative consequences, as well as a buffering impact of pain severity on damage.

Timmers, Simons, Hernandez, McCracken, and Wallace (2019) also looked at parents' ability to respond to their children's discomfort with PF. The Parent PF Questionnaire (PPFQ) was created and tested. In a paediatric clinic, 578 parent-child dyads were studied. By interacting with all parent behaviour (e.g., protectiveness) and acknowledging child discomfort after child pain management, parent relational flexibility implicitly influenced infant coping. According to the findings, parental PF has a significant adaptive influence on

children's functioning and can affect their functioning via two separate pathways, all of which can be successfully targeted in treatment.

Increased physical condition, such as chronic pain, is linked to PTSD symptoms (Kaminer, Seedat, & Stein, 2005). While several risk variables have been found that contribute to the co-occurrence of PTSD symptoms and pain, significant diversity remains unexplained (Kilpatrick et al., 2003). Berghoff, McDermott, and Dixon-Gordon (2018) published a study evaluating PF as a potential regulator of the connection between likely PTSD diagnosis and regular pain interference. When compared to non-PTSD individuals, likely PTSD participants reported considerably higher daily pain intensity and intervention, as well as higher daily pain interference in pain severity testing. In PTSD and pain interference interactions, PF is a significant moderator. Participants with possible PTSD had more pain interference only when their PF was low.

Furthermore, Boykin, Anyanwu, Calvin, and Orcutt (2019) investigated whether PF variations influenced Post-Traumatic Stress Symptoms (PTS) and perceived Post-Traumatic Growth (PTG) as the source of occurrences. A total of 125 college students were recruited from a large Midwestern university with a high trauma rate. The findings demonstrated a significant link between the importance of events and PTS's psychological flexibility (B=2.10, p=.003). Low PF was associated with higher PTS intensity as event centrality increased, according to a simple slopes analysis. Despite the fact that both event centrality and PF took PTG into account individually, no interaction impact was seen. While PF differences may influence the intensity of PTS after highly concentrated traumatic situations, the authors

found that it has a more convoluted relationship with perceived PTG that needs to be investigated further.

Ghana's Perspective

Boateng, (2017) undertook a survey to evaluate pupils' knowledge of domestic violence, forms of domestic violence, effects of domestic violence, and strategies and interventions that can be used to combat domestic violence in the neighbourhood. The author used a detailed survey template and simple random and purposeful sampling strategies to pick 30 students and 15 social workers to engage in Kumasi's Asuoyeboa research. The findings show that domestic violence impacts pupils' lives. Students expressed similar concerns about the consequences, like low-school performance. However the author refused to address the specific form of domestic assault, such as sexual harassment, which involves the violation of the pupil's bodily dignity (including coercion of sexual touch, defilement, rape, and prostitution, as well as any unwelcome).

Markwei and Osei-Hwedie (2019) followed a phenomenological research to describe CSA victims' living conditions in Ghana, using Ga culture as a case study. The results demonstrate the numerous situations in which children in the group have been sexually exploited. It also poses a socio-cultural element in the Ga Culture that normalises the sexual exploitation of children. These results underscore the need for successful prevention and community intervention services to protect children and to help children who have been sexually abused.

Salma (2014) studied the correlation between childhood sexual abuse and psychological well-being and also explored the association between ways

of childhood sexual abuse and the categories of offenders involved and their effects on psychological well-being. In the subsequent psychological sequel, he further explored the moderating role of family relationships following CSA's experience. The study included 380 senior high scholars from northern Ghana. Study results showed no difference in psychological well-being between male and female CSA interactions. Students who experienced all types of CSA (contact and non-contact) reported slightly less psychological well-being than students who encountered not or only one form of CSA. This indicates that family members' perpetuated sex has major detrimental impacts on victims. Physical abuse and family relationships have influenced psychological trauma.

Böhm (2017) used a bystander perspective to investigate the impact of child sexual abuse among Ghana's practitioners and laypeople (N=44). It explores these repercussions, particularly in respect to gender-based expectations imposed on girls and boys, given their fundamental ideas about child and adolescent development, as a qualitative analysis employing a grounded theory setting. Complications of sexual well-being, "destroyed innocence" views, and "destroyed future" ideas directly tied to the sexual character of the harm inflicted are all effects of child sexual assault. Such long-term ramifications of child sexual abuse have an impact on what it means to survive child sexual abuse.

Tetteh and Markwei (2018) have conducted research to offer an explanation and consequences of accusing children sexually abused in the Ga community of seducing offenders and sex for money. In Accra's Ga neighbourhoods including La, Teshie, and James town area, the writers used a

focus group discussion with adults, where the phenomenon is relatively widespread. According to the report, the labelling of CSA victims as "gbɛkɛfɔŋs" (children of poor character) discourages children and perpetuates child cruelty. Therefore, enforcing and putting this definition of "gbɛkɛfɔŋs" at the forefront of the discourse results largely in the exploitation of victims and a vicious spiral of CSA. The study results point to the need to reorient parental and group responsibilities and empower children to identify and avoid sexual abuse.

During their Ghana sexual debut, Morhe, Avle, and Morhe (2020) investigated the social and ethical difficulties of youth who were mistreated to enforce sexual and reproductive rights. It was a secondary cross-sectional survey of 278 sexually experienced adolescents from 12 settlements in the Ejisu-Juben district, chosen by cluster random selection. They gathered relevant data from 481 respondents in a 2009 university study effort. The authors analysed male and female sexual debut encounters using Pearson's chi-square and ANOVA tests. P-values less than 0.05 were deemed significant. Males and females were 16.05 and 15.98 years old at sexual debut (P=0.719), respectively. With identical amounts of early sexual debut, the pair endured defilement and forced sexual debut. Women who had their first sexual experience when they were younger were more likely than their older peers to have inferior educational attainment. The authors came to the conclusion that both male and female youths are subjected to sexual and reproductive rights violations at their sexual debut. The maximisation of Ghana's juvenile sexual and reproductive freedom is hampered by prevailing conditions. The authors then proposed a mechanism to make clear requirements for young people in

the criminal code sexual crimes regulation to stimulate the implementation of interventions to improve access to justice for criminals and victims.

Chapter Summary

The issue of defilement has evolved throughout the years. From the review of related literature, there are five important gaps in knowledge that the present study intended to fill. First of all, most related studies on the presence of PTSD following defilement has been conducted outside of Ghana, where social realities, health care delivery, family structure and systems, technology and economic circumstances are totally different from the local ones.

Second, majority of the studies focused on laws regarding defilement thus getting perpetrators punished leaving the health status of most victims. Even the few studies that tried looking at the victim's health only focused on psychological distresses which is one aspect of health functioning.

Third, from a thorough search of related literature, the construct PF has not been explored in any of the studies in Ghana. Fourth, it appears that no studies have explored the relationship between negative psychological outcomes such PTSD and health functioning of defilement victims.

Lastly it appears that the influence of PF on the relationship has also not been explored in Ghana. With these gaps in the literature identified, the researcher was motivated to investigate role of PF in the relationship between PTSD and Health Functioning of Defilement Victims.

CHAPTER THREE

RESEARCH METHODS

Introduction

The study aimed at investigating the moderating role of PF on the relationship between PTSD and health functioning of victims of defilement in the Greater Accra Region. The previous chapter reviewed research theories and concepts and empirical studies performed in the field. This chapter outlines various research methodologies; describes why study design is selected. It also defines the population, sample and sampling method, the tool used, data collection and retrieval and analysis procedures. Ethical considerations and measures that were adopted to provide trustworthiness are also discussed.

Research Design

Research design gives an in depth outline of the overall strategy of how the investigation was conducted. Creswell (2014) outlined three key research designs: the quantitative method emphasizes objective measurements and the statistical, mathematical, or numerical assessment of data obtained by surveys, questionnaires and surveys, or the use of computational techniques by manipulating pre-current statistical records (Muijs, 2010), qualitative approach profoundly questions and recognises the nature of a social or human issue (Creswell) assigned to individuals or groups. The third model is a synthesis of both quantitative and qualitative methodologies, combining the two methods and using different designs that may incorporate philosophical and theoretical assumptions (Creswell).

This study took on a quantitative research approach where statistics for the study are generated through the use of large-scale survey research. Quantitative approach employs two main strategies of inquiry: Experimental (thus true experiment and less rigorous experiments called quasi-experimental experiment) and nonexperimental quantitative research design (causal-comparative, correlational design) (Campbell & Stanley as cited in Creswell, 2014).

The basic method of quantitative design used for the study is the design of correlation testing, a type of quasi study in which the investigator measures two variables and investigates their statistical relationship with little to no effort to control external variables (Price, Jhaugiani, & Chiang, 2018). Although correlational research may indicate that a relationship exists between two variables, it cannot demonstrate that a shift in another variable is induced by one variable. Correlation, in other words, does not equal causation. However if a relation of sufficient magnitude exists between two variables, if a score is known on the other variable, it becomes possible to predict a score on either variable.

This study is under correlational research because the purpose for this study is to determine the link regarding PTSD and the health functioning of victims of defilement. That is, whether an increase or decrease levels of PTSD symptoms cause a change in the Health Functioning of victims of defilement.

Study Area

The area of study chosen is Greater Accra Region. The region is the country's largest urbanised region with a gross land area of 3,245 square kilometres, with 87.4 percent of its population residing in urban centres

(Songsore, 2016). The region is bounded on the north by the Eastern Region to Volta Region to the east, Gulf of Guinea to the south and Central Region to the west. Accra is the largest city and also most populated district with a population of 3,612,950 according to population of Ghana and housing census (2010). However as the capital, Accra is cosmopolitan, with people from elsewhere settling in.

Population

In general, a research population is a large group of individuals or objects that are the focus of a scientific inquiry (Creswell, 2014). Within a study population, all individuals or artefacts have a common, linking property or feature. The study population is divided into two categories: the target population and the accessible population.

The target group for a sample is the whole set of units to draw inferences using the survey data. The intended population thus defines all units where survey outcomes are to be expanded (Cohen & Morrison, 2013). However the accessible population is the study population to which the researchers may relate the study findings. This demographic is part of the target population (Cohen & Morrison, 2013). The survey sample was drawn from the available population.

The target population for the study comprised all victims of defilement within the Greater Accra region. The accessible population comprised both male and female victims from 8 to 15 years of age that report or have ever reported to any of the DOVVSU unit within the greater Accra region or currently undergoing medical examination at the police hospital at the time of

the study regardless of educational status, ethnic background, socio-economic status and religious affiliations.

Sampling Procedure

Fowler, (2014) proposed that a sample size determination can be based on the analysis plan of the research. The plan of the work was to detect a significant association between PTSD and health functioning of victims of defilement. In connection to this, the sample size was determined with G-power software developed by the institute for experimental psychology: Herinrich Heine, University of Dusseldorf (Faul, Erdfeler, Buchner & Lang, 2009). Previous research suggest that given an effect size estimate of d=.2 and a recommended level of 95% power analysis for two tailed with α=0.05, the least sample size that could be used is n=67. However, a sample size of 87 victims of defilement was accessed.

Multiple sampling procedures were employed. Convenience sampling (also known as availability sampling) and snowballing (also known as chain-referral sampling) were employed for the study (Dudoskly, 2018). These two sampling procedures were used because there was no sampling frame due to the sensitive nature of the defilement cases. This made it impossible to use probability sampling hence the need to fall on non-probability sampling.

Convenience sampling is a form of non-probability sampling that relies on the collection of data from members of the population who can participate in a study conveniently (Dudoskly, 2018). That is, having participants anywhere they can be found and usually in terms of access, location, time and willingness wherever it is convenient. Based on the fact that defiled children are only identifiable after careful search, the researcher made contact with

relevant state institutions (such as DOVVSU, Greater Accra regional headquarters, the Police hospital and the Social welfare department, headquarters, Accra) in order to obtain the identities and locations of children with histories of defilement. Most of the victims of defilement who reported directly at the DOVVSU unit as at the time of the study had been sexually abused two to three months prior to data collection. Convenient sampling technique made it easier for subjects to be selected because of their convenient accessibility and proximity to the researcher.

Snowballing sampling approach is based on referrals from initial subjects to generate additional subjects (Cohen, Manion, & Morrison, 2013). Dudovskiy (2014), identified three forms of snowball sampling: Linear snowball sampling means developing a sample group for a survey that begins with only one subject and the subject provides just one referral, the referral is incorporated into the study and it then offers only one new referral and this process persists before the sample group is fully established. The next method of snowballing is the exponential non-discriminatory snowball sampling in which multiple referrals are given by the subject recruited to the sample set and each new referral is analysed until enough samples are obtained. Then the Exponential discriminatory snowball sampling where many referrals are provided by subjects for the analysis, but among them, only one new subject is enlisted. Normally, the choice of a new topic is driven by the aims of the research. In line with this, the linear snowball sampling method was used as a member in the community directed the researcher to one of the victim of defilement's house, after which the victim also led us to another victim of defilement and it continued until a sufficient number of sample was gathered.

Although some of the respondents were hesitant to provide identities of peers when they asked to do so raised ethical concerns which is one of the weaknesses of the technique. However, respondents were reassured of confidentiality and privacy during data collection. One of the advantages of the technique was that the researcher was able to identify and recruit victims which would have been very difficult to reach.

Convenient and snowball sampling were well suited for this study because one sampling method may not have yielded to the estimated sample size since it was difficult accessing the target population. Also many of the victims of defilement mostly fail to report at the DOVVSU unit.

Inclusion and Exclusion Criteria

Inclusion and exclusion criteria are a set of predefined features used to classify subjects included in a test sample or excluded (Salkind, 2010). The selection or qualifying criteria used to rule in or out a research study target category are composed of inclusion criteria and exclusion criteria. The inclusion criteria are victims from 8 to 15 years. Victims below 8 and above 15 were excluded from the study.

Data Collection Instruments

The data collection method was a questionnaire (See Appendix A). A questionnaire is an instrument composed of a written list of data collection questions. It needs respondents to read, translate and write responses to achieve the study's goal (Cohen & Morrison, 2013). The questionnaire was chosen because it is less costly and provides greater secrecy or confidentiality, particularly when there are sensitive issues like defilement. The questionnaire is useful while examining a large sample (Cohen & Morrison, 2013). Despite

these strengths, the questionnaire has many drawbacks, including low answer rate, lack of opportunity on the researcher's road to explain problems that are not obvious to respondents (Cohen & Morrison, 2013). The study questionnaire consisted of various structured and non-standardized inventories to obtain various types of research participants' knowledge. Every questionnaire had four main parts.

The first section gathered demographic data of the respondents such as age, gender, educational level as well as religious affiliation. The second section measured PTSD, the third measured PF and the fourth section measured Health functioning of victims of defilement.

PTSD-*The Child PTSD Symptom Scale (CPSS)*

The Child PTSD Symptom Scale (CPSS), developed by Edna Foa in 2001, was used to assess Post-Traumatic Stress Disorder. The CPSS has been updated in a developmentally appropriate manner to maximise children's understanding of the items. It was created to measure PTSD diagnostic criteria and symptom severity based on descriptions and standards from the DSM-IV (Foa as cited in Psychtool, 2017).

The overall scores and the three subscales have a high internal consistency and test-retest reliability, according to reports on the scale's creation and preliminary validation for children and adolescents (Foa, 2001). The scale consists of 26 items divided into 2 incidents, 17 symptoms, and 7 functioning items. However, this study used only 17 symptom component. This is because the seven CPSS scale functional items were identical to those on the WHODAS scale assessing health functioning.

The symptoms are separated into three subscales: re-experiencing, avoidance, and hyperarousal behaviours, which are all scored on a 4-point frequency scale ranging from 0 (never or only once) to 3 (5 or more times a week/almost often) (Foa as cited in Psychtool, 2017). Each of the first 17 items is graded on a scale of 0 to 3, with a total score ranging from 0 to 51 when they are added together to determine the severity of PTSD symptoms. Re-experiencing symptoms are on things 1-5, avoidance symptoms are on items 6-12, and hyperarousal symptoms are on items 13-17. A total score is calculated by summing the scores for each symptom item and converting the result to a number between 0 and 51. Higher scores imply more severe symptoms (Foa as reported in Psychtool, 2017), and a clinical cutoff of 15 is used to diagnose PTSD (Child PTSD Symptom Scale as cited in Psychtool, 2017). The instrument is scored as follows:

- 0 – 10 Below threshold
- 11 – 15 Subclinical – Mild
- 16 – 20 Mild
- 21 – 25 Moderate
- 26 – 30 Moderately Severe
- 31 – 40 Severe
- 41 – 51 Extremely Severe

The scale has been proven to have good sensitivity and specificity, as well as strong internal consistency and test-retest reliability, for both the overall score and the three subscales of symptom items (Foa, Johnson, Feeny, & Treadwell, as cited in Psychtool, 2017). The scale has been regularly utilised among children and adolescents aged 8 to 18. The CPSS can be used

as a diagnostic tool in the form of a semi-structured interview by a professional or as a self-report measure. It has also been utilised for study on a large number of youngsters with a history of trauma (Kohrt, Jordans, Tol, Luitel, Maharjan, & Upadhaya, as cited in Psychtool, 2017).

PSYCHOLOGICAL FLEXIBILITY-*Children's Psychological Flexibility Questionnaire (CPFQ)*

An adapted CPFQ-24-item child's self-report developed by Dixon and Paliliunas, (2017) was used to assess psychological flexibility. The scale has 24 items with six sub-scales (6 domains or categories) rated on a 5-point scale from 0 (Never) to 4 (All the time) that measure the present moment, acceptance, defusion, self as context, values and committed actions according to the core ACT process (Thus the processes through which PF is established).

Each of these domains has 4 items: Present moment include item 1, 5, 11, 18; Acceptance include item 8, 9, 14, 19; Defusion include item 2, 12, 13, 20; Self-As-Context include item 4, 10, 21, 22; Values include item 3, 7, 16, 23; Committed Action include item 6, 16, 17, 24. Items 4, 6, 8, 11, 13, 17, 18, 19, 20, 21, 23 were reverse coded , after which all items in each category were added to obtain the core process subtotal. Subsequently, all scores in each category were added to obtain a PF total Score. Higher scores obtained by a respondent indicate greater PF, while lower scores suggest greater inflexibility.

The CPFQ has been relevant and implemented in different settings. Example, in therapeutic settings, it has been shown to determine the suitability of different patients to different types of psychotherapies (Hatchett & Han, 2006).

HEALTH FUNCTIONING-*World Health Organisation Disability Assessment Schedule 2.0 (WHODAS 2.0)*

The World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0) is a quick measure of global disability that was originally developed for adults and is now being used with children and youth. The WHODAS 2.0 was created as part of a joint multinational effort to provide a single generic instrument for assessing health status and disability across cultures and environments. Cognition, Self-Care, Mobility, Interpersonal Relationships, Work and Household Roles, and Community and Civic Roles are the six key life domains assessed by WHODAS 2.0.

The 12 items is a shortened version of the original 36 items in its full version with a Cronbach's alpha of .98. The 12 item version also assesses the six domains. Each of the domain has 2 items: Cognition item consist of item 6 and 3; Self-care is made up of item 8 and 9; Mobility include 1 and 7; Interpersonal relationships include item 10 and 11; Work and household consist of item 8 and 9; Community and Civic roles is made up of 4 and 5. The WHODAS summary scores can be computed using one of two methods. Simple: The scores for each item—"none" (1), "mild" (2), "moderate" (3), "severe" (4), and "extreme" (5)—are added together. Because the scores from each of the items are simply summed up without recoding or collapsing of response categories, this method is referred to as simple scoring; consequently, there is no weighting of individual items. As a hand-scoring method, this strategy is practical, and it may be the method of choice in hectic clinical settings or in paper-and-pencil interview scenarios. As a result, the simple sum of the item scores across all domains yields a statistic that accurately reflects

the degree of functional restrictions. Complex: "Item-response-theory" (IRT)–based scoring is a more complicated approach of scoring. For each WHODAS 2.0 item, it considers different levels of difficulty. It takes each item's classification as "none," "mild," "moderate," "severe," and "extreme" separately, and then utilises a computer to calculate the overall score by differentially weighting the items and severity levels. The computer program is available from the WHO Web site. The scoring has three steps:

- Step 1—Summing of recoded item scores within each domain.
- Step 2—Summing of all six domain scores.
- Step 3—Converting the summary score into a metric ranging from 0 to 100 (where 0 = no disability; 100 = full disability).

The WHODAS 2.0 is a five-point Likert-type scale (0-4) that asks respondents to judge how true the claims about themselves are. The Likert scale runs from 0 to 4, with 0 denoting no response, 1 denoting mild, 2 denoting moderate, 3 denoting severe, and 4 denoting extreme or inability to do so. The highest score indicates a severe handicap that may be accompanied by a mental health problem, whereas the lowest or lowest score suggests a minor or non-existent disorder. WHODAS 2.0 fills a gap in the market for a reliable tool that can be used to assess the impact of health issues, track the efficacy of interventions, and quantify the burden of mental and physical diseases in different populations.

Pilot-testing of Instrument

To ascertain the reliability of the research instrument, the research instrument was subjected to pilot-testing. They point out any problems with the test instrument, instances where items are not clear and other typographical errors (Thabane et al., 2010). Pilot-testing was done with seven victims of

defilement who reported at the regional DOVVSU in the Central region, Cape Coast. Results from the reliability analysis of the various instruments used are shown in Table 2.

Table 2- ***Reliability test from pilot-testing of research instruments***

Scale	Cronbach alpha
The Child PTSD Symptom Scale (CPSS)	.945
Children's Psychological Flexibility Questionnaire (CPFQ)	.939
World Health Organisation Disability Assessment Schedule 2.0 (WHODAS 2.0)	.761

Source: Field survey, (2020)

The results in Table 2 show the reliability coefficients of the various instruments used in the study. The results show that all the instrument have high internal consistency and thus implies that instruments are reliable.

Data Collection Procedure

The Department of Education and Psychology and the Institutional Review Board at the University of Cape Coast provided an introductory letter (see Appendix A) and ethical clearance (see Appendix B). The introductory letter was given to the administrators of the Ghana Police Service's DOVVSU (Headquarters) as well as the Ghana Police Hospital in Accra to introduce the researcher and the assistants and to explain the research's goal. Later, the ethical clearance was provided, and permission was granted (see Appendix C) to begin data collecting.

The researcher obtained a list and location of defiled victims. Follow up was made to trace the victims and at the same time victims who reported

directly as at the time of the study were also included. After locating them, the researcher with the assistant administered the research questionnaires to them.

Similarly, based on information given at DOVVSU concerning areas with high reported cases of defilement, the researcher identified and administered questionnaires to children in the Korle-Gonno, Jamestown as well as Chorkor and its environs with a history of defilement. Prior to administering the questionnaires, the researchers informed the participants and their guardians about the study's purpose in order to acquire their agreement. The questionnaires were given to the participants after their consent had been obtained, and they were given instructions on how to complete them. All participants were informed that their responses would be kept private. The information gathered was kept private. The surveys had no identifying information on them, so the participants filled them out anonymously. The questionnaire took roughly 20 to 25 minutes to complete for each participant. Due to the outbreak of the COVID-19, there was a break in the data collection and this affected the stipulated time originally allocated for data collection for the study. In all it took the researcher 9 months to complete the data collection procedure.

Data Processing and Analysis

The data collected was edited, organised and categorised without altering the responses and processed. The total score of responses on the CPSS Symptom Scale was calculated and coded based on the interpretation of Foa and colleagues and the Children's Psychological Flexibility Questionnaire (CPFQ) was reversed coded and computed based on the scoring and interpretation of Dixon and Paliliunas (2017). Finally, the World Health

Organisation Disability Assessment Schedule 2.0 (WHODAS 2.0) was scored and coded based on the interpretation given by WHO guidelines. The composite scores of the various inventories were calculated in order to aid parametric data analysis.

Both descriptive and inferential statistics were used to analyse the data. The demographic factors in the study were analysed using descriptive statistics. It was used to calculate the variable's frequency distributions, means, and standard deviations. In addition, the data for the first study question was analysed using means and standard deviation. Frequencies and percentages were used to analyse the data for research question two. The third study topic was analysed using means and standard deviation. Hypotheses 1, 2, and 3 were tested using multiple regression to determine the relationship between the hypotheses and the variables' predictive abilities. For route analyses, Hypothesis 4 was examined using Hayes PROCESS.

Ethical Considerations

Ethical approval was sought from the Institutional Review Board of the University of Cape Coast. In addition, each participant and their guardians were given a written informed consent to read and understand before respondent was allowed to enrol in the study. Those who chose to participate but later decide to withdraw were permitted. Anonymity was ensured by assigning codes to study participants and information collected was confidential since it was used for the research purposes only. For instance, the data coding was done without the names and contacts of participants on them. The information was entered onto SPSS with the researcher’s own laptop with

a password which prevented unauthorized users access. The questionnaires were later on disposed and set ablaze.

Chapter Summary

The chapter presented the research design employed in the study; the cross sectional survey design, the study area, the population of the study which included victims of defilement, the sampling procedures used and the sample size for the study. The chapter also presented ethical issues, data collection procedure and data processing and analysis addressed in the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

The purpose of the study was to investigate the moderating role of psychological flexibility on the relationship between PTSD and health functioning of victims of defilement in the Greater Accra Region. This section presents the analysis of the results on data collected from 87 children who had been defiled. The chapter is organised in two parts. The first part presents the analysis of the results, while the second part presents the discussion of the results.

Results

This part entails the results of the data collected from the field. The results are presented in two sections. The first section presents the background information of the respondents, while the second section presents the main findings.

Background Information

This section presents the background information of the respondents. This information includes age, gender, level of education, and religion. Table 3 presents the results of the analysis of the responses on the background information of the respondents.

Table 3- ***Background Information of the Respondents***

Variable	Frequency	Percentage (%)
Gender		
Male	9	10.3
Female	78	89.7
Level of education		
Primary	33	37.9
Junior High School	35	40.2
Senior High School	19	21.9
Religion		
Christianity	69	79.3
Islamic	18	20.7

Source: Field survey (2020)

From the distribution of the respondents based on background information, there were more females (89.7%) than males (10.3%) respondents (Table 1). The majority of the respondents (40.2%) indicated they have junior high school education, 37.9% had primary education, while 21.9% have senior high school education. Most of the respondents (79.3%) indicated they were Christians, however, 20.7% were Muslims. The mean age of the respondents was 12.48 ±2.29 years, as at last birthday.

Main Findings

This section presents the main results. The results are presented in the order of the research questions and hypothesis.

Research Question 1

What are the levels of PTSD experienced by victims of defilement?

This research question explored the level of post-traumatic stress disorder (PTSD) experienced by the victims of defilement. PTSD level of the respondents was assessed using the Child PTSD Symptom Scale (CPSS). The analysis of the responses of the respondents is presented in Table 4.

Table 4- *Descriptive Statistics of PTSD Dimension*

Sub-scale	Score range	Mean	SD
Re-experience	0 – 3.0	1.56	0.65
Avoidance	0 – 3.0	1.58	0.57
Hyperarousal	0 – 3.0	1.65	0.59

Source: Field survey (2020)

The descriptive information of the sub-dimensions of PTSD is shown in Table 2. The mean scores for each of the dimensions of PTSD range from 0 to 3.0. From Table 2, the respondents experienced more of hyperarousal symptoms (M = 1.65, SD = 0.59), followed by avoidance (M = 1.58, SD = 0.57), then re-experience symptoms (M = 1.56, SD = 0.65). Table 4 presents the analysis of the results on the overall PTSD and the levels at which respondents experience PTSD.

Table 5- *Level of PTSD*

Level	Range	Frequency	Percentage (%)
Below threshold	0 – 10	2	2.3
Subclinical	11 – 15	4	4.6
Mild	16 – 20	6	6.9
Moderate	21 – 25	21	24.1
Moderately severe	26 – 30	19	21.8
Severe	31 – 40	28	32.2
Extremely severe	41 – 51	3	3.4
Not applicable		4	4.6
Total		87	100.0

Source: Field survey (2020)

The results in Table 5 shows that PTSD scores of the respondents ranged from 0 – 51. Thus the overall score for PTSD is 51. As shown in Table 5, the majority of the respondents (32.2%) had severe PTSD. This was followed by those with moderate level PTSD (24.1%), and moderately severe (21.8%). Few of the respondents (2.3%) experienced below threshold, and 3.4% also experienced extremely severe PTSD. Generally, 78.1% of the respondents experienced moderate to severe PTSD.

Research Question 2

What are the levels of psychological flexibility in victims of defilement?

This research question examined the level of psychological flexibility among the defiled victims. Information on psychological flexibility was assessed using the Child Psychological Flexibility Questionnaire (CPFQ). Table 6 presents the analysis of the results of responses on the dimensions of PF.

Table 6- *Descriptive Statistics of PF*

Sub-scale	Score range	Mean	SD
Present moment	0 – 16	8.17	2.27
Self-as-context	0 – 16	7.76	2.66
Acceptance	0 – 16	7.96	4.16
Values	0 – 16	8.51	2.20
Defusion	0 – 16	8.47	2.11
Committed action	0 – 16	8.39	2.06

Source: Field survey (2020)

The scores for each of the dimensions of PF range from 0 – 16. From Table 6, respondents predominantly used values (M = 8.51, SD = 2.20), followed by defusion (M = 8.47, SD = 2.11), and committed action (M = 8.39, SD = 2.06). The type of psychological flexibility least employed was self-as-context (M = 7.76, SD = 2.66). The overall psychological flexibility of the respondents was determined and classified as low, mild, moderate, and high. Details of the analysis of the results of responses are presented in Table 7.

Table 7- *Level of Psychological Flexibility*

Level	Range	Frequency	Percentage (%)
Low	0 – 23	-	-
Mild	24 – 47	36	41.4
Moderate	48 – 71	45	51.7
High	72 – 96	1	1.1
Not applicable		5	5.7
Total		87	100.0

Source: Field survey (2020)

The data in Table 7 shows that, a little more than half of the respondents (51.7%) demonstrate moderate PF, 41.4% also portray mild form of psychological flexibility. Only one of the respondents (1.1%) demonstrated high level of PF. In all, 92.1% of the respondents portrayed mild to moderate levels of PF.

Research Question 3

What are the levels of health functioning among victims of defilement?

The focus of this research question was to determine the level of health functioning among victims of defilement. Health functioning was assessed through the use of World Health Organisation Disability Assessment Scale (WHODAS) 2.0 version with 12 items. The analysis on the results of the responses on the dimensions of health functioning are presented in Table 8.

Table 8- *Descriptive Statistics of Health Functioning*

Sub-scale	**Score range**	***Mean***	***SD***
Cognition	0 – 100	44.19	24.76
Mobility	0 – 100	37.50	20.17
Getting along	0 – 100	52.30	24.38
Self-care	0 – 100	35.20	24.60
Life activities	0 -100	42.96	21.37
Participation	0 – 100	50.00	18.18

Source: Field survey (2020)

The data in Table 8 shows the various dimensions of health functioning. The scores of each of the dimensions were transformed to a scale of 0 – 100, where 0 means no disability/full functioning and 100 means full disability. From the results, the respondents functioned best in self-care (*M* =

35.20, *SD* = 24.60), followed by mobility (*M* = 37.50, *SD* = 20.17), and in life activities (*M* = 42.96, *SD* = 21.37). The poorest was in getting along (*M*=52.30, *SD* = 24.38). The scores of the respondents were further categorised into five to determine their level of health functioning. Details of the analysis of the results are shown in Table 9.

Table 9- *Level of Health Functioning*

Level	Range	Frequency	Percentage (%)
None	0 – 19.9	4	4.6
Mild	20 – 39.9	28	32.2
Moderate	40 – 59.9	42	48.3
Severe	60 – 79.9	12	13.8
Extreme	80 – 100	-	-
Not applicable		1	1.1
Total		87	100.0

Source: Field survey (2020)

The data in Table 9, shows that the majority of the respondents (48.3%) experienced moderate health functioning. This was followed by those with mild health functioning (32.2%), then those with severe (13.8%). Few of the respondents (4.6%) experienced low health functioning.

Hypothesis Testing

The study tested four hypotheses. Prior to the testing of these hypotheses, normality assumption was checked using Kolmogorov-Smirnov and Shapiro-Wilk tests. The normality results are presented in Table 10.

Table 10- *Normality Test of HF scores*

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Variable	Statistic	df	Sig.	Statistic	Df	Sig.
HF	.072	82	.200	.988	82	.624
PTSD	.064	82	.200	.988	82	.659

Source: Field survey (2020)

The results in Table 10 show that both health functioning and PTSD did not violate the normality. This was because both the Kolmogorov-Smirnov and Shapiro-Wilk test p-values were greater than .05. In addition to the tests, visual examinations of the normal Q-Q plots and histograms of both health functioning and PTSD confirmed the normality of the distribution (Appendix C).

Hypothesis 1

H_0: There is no significant relationship between PTSD and Health Functioning of victims of defilement.

H_1: There is a significant relationship between PTSD and Health Functioning of victims of defilement.

The hypothesis examined the relationship between PTSD and Health Functioning among victims of defilement. The hypothesis was tested using both simple and multiple linear regression analysis. The predictor variable was PTSD and the criterion was the composite of Health Functioning. All the variables were measured on scale. Table 11 present the model summary.

Table 11- *Overall Model Summary for Hypothesis One*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.303	.092	.080	13.17660	1.519

F (1, 80) = 8.07, *p* = .006

The model was statistically significant, *F* (1, 80) = 8.07, *p* = .006, R^2 = .092. The model accounted for 9.2% of the variations in Health Functioning. Table 11 presents the regression coefficients. With a Durbin-Watson's value (d) of 1.52, there was no autocorrelation, since it was greater than 1.4 but less than 2.5. Assumptions such as linearity, normality, and homoscedasticity of the residuals were met (Appendix D). Table 12 presents the regression coefficients.

Table 12- *Coefficients for PTSD Composite*

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	29.880	5.301		5.636	.000
PTSD	.530*	.187	.303	2.841	.006

*Significant, *p* < .05

The data in Table 12, shows that PTSD was a statistically significant predictor of Health Functioning, β = .53, *p* = .006. It is a positive predictor of Health Functioning. The hypothesis was further tested using multiple linear regression analysis. The predictor variables were the three dimensions of PTSD, namely, re-experience, avoidance, and hyperarousal. The criterion variable was Health Functioning. All the variables were measured on a scale. Table 13 presents the model summary.

Table 13- *Overall Model Summary for Hypothesis One*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.361	.130	.097	13.05844	1.60

F (3, 78) = 3.89, *p* = .012

Table 13, the overall model with re-experience, avoidance, and hyperarousal as predictors was significant, *F* (3, 78) = 3.89, *p* = .012, adjusted R^2 = .097. The result implies that 9.7% of the variance in HF was accounted for by re-experience, avoidance, and hyperarousal. With a Durbin-Watson's value (d) of 1.60, there was no autocorrelation, since it was greater than 1.4 but less than 2.5. The contributions of re-experience, avoidance, and hyperarousal are shown in Table 14

Table 14- *Regression Coefficients for PTSD and HF*

	Unstd. Coeff.		Std. Coeff.			
Parameter	B	SE	Beta (β)	*T*	Sig.	VIF
(Constant)	27.449	5.423		5.062	.000	
Re-experience	-1.086	2.909	-.050	-.373	.710	1.63
Avoidance	3.146	2.986	.128	1.053	.295	1.32
Hyperarousal	8.178	3.160	.326*	2.588	.011	1.42

Source: Field survey (2020); *Significant, *p* < .05

From the VIFs in Table 14, there was no multicollinearity, since all the VIFs are less than 10. The results showed that re-experience (β = -.05, *p* = .710) and avoidance (β = .13, *p* = .295) were not significant predictors of Health Functioning. The results further showed among the three dimensions of PTSD, hyperarousal was the only significant predictor of HF (β = .33, *p* = .011). The result implies that a standard deviation unit increase in

hyperarousal would lead to .33 standard deviations increase in Health Functioning. Hyperarousal was the only positive predictor of Health Functioning. This means that as victims of defilement experience increase in hyperarousal, their Health Functioning deteriorates. In all, evidence from this study led to the rejection of the null hypothesis based on hyperarousal.

Hypothesis 2

H_0: *There is no significant relationship between Psychological Flexibility on Health Functioning of victims of defilement.*

H_1: *There is a significant relationship between Psychological Flexibility and Health Functioning of victims of defilement.*

This hypothesis tested the relationship between Psychological Flexibility and Health Functioning among victims of defilement. Simple and Multiple linear regression analysis were used to test the hypothesis. The predictor variable was Psychological Flexibility and the criterion was Health Functioning. All the variables were measured on scale. Table 15 present the model summary.

Table 15- ***Model Summary for PF and HF Composite***

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.028	.001	-.012	14.65245	1.487

F (1, 79) = .06, *p* = .807

From Table 15, the model containing Psychological Flexibility and Health Functioning was not statistically significant, *F* (1, 79) = .06, *p* = .807, R^2 = .001. The model accounted for 0.1% of the variations in Health Functioning. The regression coefficient is shown in Table 16

Table 16- *Coefficients for PF and HF Composite*

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	46.089	10.695		4.309	.000
PF	-.052	.214	-.028	-.246	.807

As shown in Table 16, Psychological Flexibility is not a significant predictor of Health Functioning (β = -.05, *p* = .807).

The hypothesis was further tested using multiple linear regression analysis. The criterion variable was Health Functioning, which was measured on continuous basis. The predictor variables were the six dimensions of Psychological flexibility: present moment, self-as-context, acceptance, values, defusion, and commitment. These variables were measured on a scale. Results on linearity, normality, and homoscedasticity of the residuals are presented in Appendix D. The overall model is presented in Table 17.

Table 17- *Overall Model Summary for Hypothesis Two*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.263	.069	-.006	14.61283	1.611

F (6, 74) = .92, *p* = .489

The data on Table 17 shows that the overall regression model containing present moment, self-as-context, acceptance, values, defusion, and commitment was not statistically significant, F(6, 74) = .92, p = .489, adjusted R^2 = .006. The model explained 0.6% of the variations in Health Functioning. Table 18 present the regression coefficients.

Table 18- *Regression Coefficients for PF and HF*

Parameter	Unstd. Coeff. B	Unstd. Coeff. SE	Std. Coeff. Beta (β)	*T*	Sig.	VIF
(Constant)	36.689	11.962		3.067	.003	
Present moment	.001	.768	.000	.002	.999	1.175
Self-as-context	-.656	.611	-.122	-1.074	.286	1.020
Acceptance	-.355	.396	-.103	-.896	.373	1.046
Value	.145	.798	.022	.182	.856	1.181
Defusion	.346	.788	.050	.439	.662	1.048
Commitment	1.239	.801	.178	1.546	.126	1.053

Source: Field survey (2020)

There was no multicollinearity, as indicated by the VIFs of all the predictor variables (Table 18). Analysis to test the hypothesis showed that none of the six dimensions of Psychological Flexibility was a significant predictor of Health Functioning ($p > .05$). From the results, the null hypothesis was not rejected.

Hypothesis 3

H_0: There is no significant relationship between Psychological flexibility and PTSD following defilement.

H_1: There is significant relationship between Psychological flexibility and PTSD following defilement.

The focus of this hypothesis was to examine the relationship between PF and PTSD among victims of defilement. The hypothesis was tested using both simple and multiple linear regression analysis. Linearity, normality, and homoscedasticity of the residuals assumptions are presented in Appendix E. The model summary is presented in Table 19.

Table 19- *Model Summary for PF and PTSD Composites*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.036	.001	-.012	7.76499	1.048

F (1, 76) = .10, *p* = .757

From Table 19, the model for Psychological flexibility and PTSD was not statistically significant, *F* (1, 76) = .10, *p* = .757, R^2 = .001. Psychological Flexibility explained 0.1% of the variations in PTSD. Table 20 presents the parameter results.

Table 20- *Model Summary for PF and PTSD Composites*

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	25.634	5.675		4.517	.000
PF	.035	.114	.036	.310	.757

As indicated in Table 20, Psychological flexibiltiy is not a significant predictor of PTSD (β = .04, *p* = .757). The hypothesis was further tested using multiple linear regression. The predictor variables were the six dimensions of PF: present moment, self-as-context, acceptance, values, defusion, and commitment. The criterion variable was the composite score for PTSD. The model summary is presented in Table 21.

Table 21- *Overall Model Summary for Hypothesis Three*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.412	.170	.100	7.32431	1.235

F(6, 71) = 2.42, *p* = .035

The data in Table 21 shows that overall model containing present moment, self-as-context, acceptance, values, defusion, commitment, and PTSD was statistically significant, $F(6, 71) = 2.42$, $p = .035$, adjusted $R^2 = .10$. The model accounted for 10% of the variation in PTSD among victims of defilement. The contribution of each of the dimensions of PF is presented in Table 22.

Table 22- *Regression Coefficients for PF and PTSD*

	Unstd. Coeff.		Std. Coeff.			
Parameter	B	SE	Beta (β)	*T*	Sig.	VIF
(Constant)	21.599	6.042		3.575	.001	
Present moment	-.482	.387	-.146	-1.245	.217	1.18
Self-as-context	.851	.315	.298*	2.705	.009	1.04
Acceptance	-.037	.198	-.020	-.184	.854	1.05
Value	-.595	.406	-.171	-1.465	.147	1.17
Defusion	.741	.403	.204	1.840	.070	1.05
Commitment	.266	.422	.071	.630	.531	1.09

Source: Field survey (2020); *Significant, $p < .05$

The data on Table 22 shows that among the six dimensions of Psychological Flexibility, self-as-context was the only significant predictor of PTSD ($\beta = .30$, $p = .009$). The result implies that for every standard deviation unit increase in self-as-context, PTSD would increase by .30 standard deviations. This means a positive relationship exist between self-as-context and PTSD. However, present moment, acceptance, values, defusion, and commitment were not significant predictors of PTSD ($p > .05$). From the results, the null hypothesis was not rejected.

Hypothesis 4

H_0: Psychological Flexibility will not moderate the relationship between PTSD and Health Functioning of victims of defilement.

H_1: Psychological Flexibility will moderate the relationship between PTSD and Health Functioning of victims of defilement.

This hypothesis sought to determine whether the relationship between PTSD and Health Functioning is contingent on Psychological Flexibility. This hypothesis was tested using Hayes PROCESS for moderation analyses. Specifically, 5000 bootstrap samples were used with percentile bootstrap confidence intervals at 95% level of confidence. The predictor variable was PTSD. The criterion variable was Health Functioning. The moderator variable is Psychological flexibility. All the variables were measured on continuous basis. The results are presented in Tables 23.

Table 23- ***Moderating effect of PF on PTSD and HF***

				Boot95%CI	
		B	*BootSE*	*LLCI*	*ULCI*
Constant		-34.07	47.06	-128.01	55.79
X on Y		3.03	1.79	-.27	6.78
W on Y		1.22	.91	-.54	3.08
X*W on Y		-.05	.03	-.12	.02
Model Summary					
R^2	*F*	df1	df2		*P*
.135	3.80	3	73		.014
Conditional interaction (X*W)					
ΔR^2	*F*	df1	df2		*P*
.03	2.64	1	73		.109

W –PF; X – PTSD; Y – HF

The entire model containing the PTSD, PF and the interaction between PTSD and Psychological flexibility was statistically significant (Table 23).

The model explained 13.5% of the variations in Health Functioning among victims of defilement. The results further show that the interaction between PTSD and Psychological Flexibility did not significantly predict Health Functioning, B = -.05, 95%CI [-.12, .02]. Though the interaction term contributed 3% (ΔR^2 = .03) extra to the variations in Health Functioning, it was not statistically significant (p = .109).

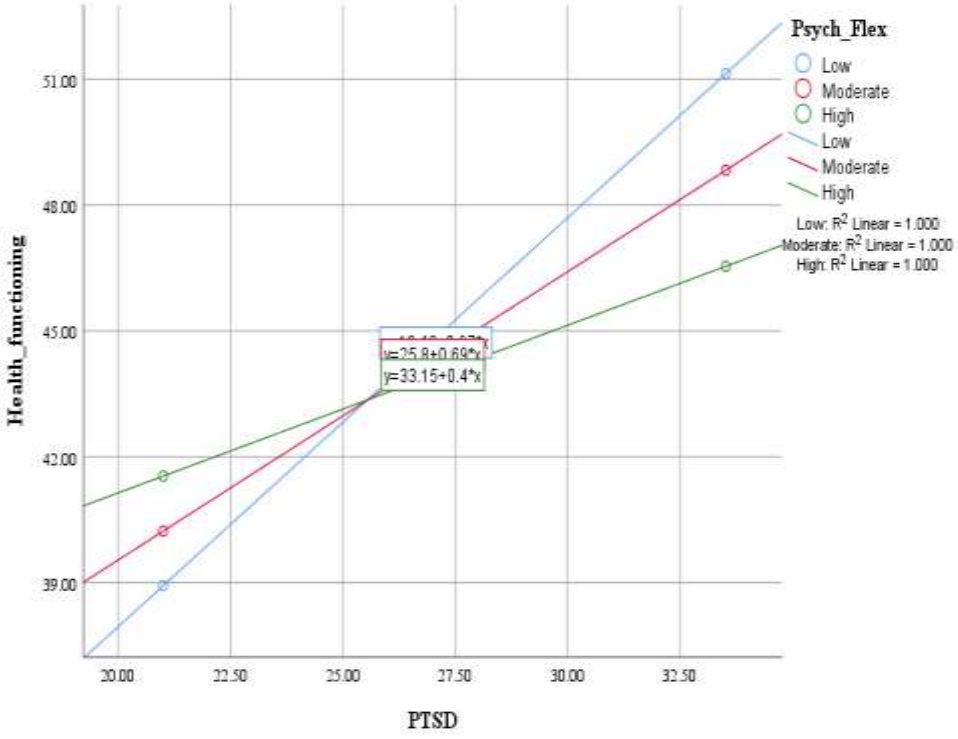

***Figure 2*: Interaction effect of PF on PTSD and HF**

From Figure 2, the relationship between PTSD and Health Functioning was positive across all the three levels of Psychological flexibility. The result implies that the relationship was similar at all levels of Psychological flexibility. This confirms why the interaction was not significant, hence there is no moderation. For the purpose of probing the interaction, the following scores, 43.0, 49.0, and 55.0 were used for low, moderate, and high Psychological Flexibility, respectively. From the results, the null hypothesis was upheld.

Summary of Results

From the analyses from the data, the result revealed that more females than males experienced defilement, majority of the victims enrolling in Junior high school. Generally, victims experienced some levels of PTSD symptoms with majority experiencing moderate to extremely severe PTSD. Most of the victims experienced hyperarousal symptoms with few of them exhibiting re-experiencing.

Furthermore, victims had some level of Psychological Flexibility with the majority of the respondents endorsing moderate level of Psychological Flexibility with only one having high level of Psychological Flexibility. None of them scored low Psychological Flexibility. Majority of the respondents' experienced moderate levels of Health Functioning followed by those with mild health.

There was a positive relationship between PTSD and Health Functioning. However, among the three dimensions of PTSD, hyperarousal was the only significant predictor of Health Functioning. Based on this finding the null hypothesis was rejected in favour of the alternate hypothesis.

There was no significant relationship between Psychological flexibility and Health Functioning and none of the six dimensions of Psychological flexibility significantly predicted Health Functioning. This finding supports the null hypothesis.

Psychological flexibility did not predict PTSD outcome. However, among the six dimensions of Psychological flexibility, self-as-context was the only significant predictor of PTSD, yet the null hypothesis was not rejected.

Psychological Flexibility did not moderate the relationship between PTSD and HF, which is supportive of the null hypothesis.

Discussion of Findings

In relation to the empirical literature studied, the study's research results are discussed. It outlines areas where other research findings are confirmed by the results of this report, as well as areas where there are contradictions.

The background information of the victims showed that more females victims outnumbered their male counterparts in this study. The finding of this study is in line with most studies on defilement. For instance, Radford, Richardson-foster, Barter and Stanley (2017) found that usually females reported 2–3 times being defiled than males. According to the WHO, approximately 73 and 150 million boys and girls, respectively, are subjected to various forms of defilement, and one in every five women and one in every thirteen men were sexually assaulted as youngsters (WHO, as cited in Ebuenyi, Chikezie, & Dariah, 2018).

Cultural factors such as patriarchal complexities, acceptance of the child rape myth and a collective shame issue leading to non-disclosure may be possible explanations for more women becoming victims of defilement, thereby raising the incidence of defilement cases against women (Coker-Appiah & Cusack, 1999). This situation usually encourages men and justifies sexual coercion, trivialize sexual violence, and demean and devalue females.

However the results of this study are inconsistent with those of Ashraf, Niazi, Masood and Malik (2019), who stated that the prevalence of sexual harassment did not vary significantly in terms of gender. The variance in the

research participants and the sample size of the analysis may be attributed to the differences in the research results. The authors enrolled 478 (males =247(52%), females =231(48%) as against 87 victims for this study.

Levels of PTSD Experienced by Victims of Defilement

The results from this study revealed that victims of defilement experience symptoms of PTSD. Most victims experienced further signs of hyperarousal, followed by avoidance and re-experience of PTSD symptoms (see Table 2). This finding is consistent with the Diagnostic and Statistical Manual (DSM-IV) criteria requirements for the diagnosis of PTSD in children. In order for a child to be diagnosed with PTSD, the child should show at least three symptoms of avoidance, two elevated symptoms of arousal and at least one symptom of re-experiencing (Carson, Foster, & Tripathi, 2013).

In line with the DSM-IV criteria, many of the victims may meet the full diagnosis of PTSD with majority experiencing hyperarousal and avoidance symptoms. McLaughlin, Brent and Hearmann (2018) revealed that children with PTSD display extended arousal and emotional reactivity for the most part. It is also believed that most of these victims can have sleeping difficulties and attempt during play time to re-enact the traumatic incident or parts of the event. Many with symptoms of avoidance can also be seen avoiding locations, persons, and circumstances that evoke painful memories. There may be flashbacks, nightmares and bad memories of the defilement of the few victims who may exhibit re-experiencing symptoms (Shenk, Putnam, & Noll, 2012). It can also sound as if they are reliving the incident. All these experiences of victims will interfere with the functioning of their everyday wellbeing.

Generally, majority of the victims experienced moderate to severe symptoms of PTSD with only three of the victims endorsing extremely severe symptoms of PTSD (see Table 3). The findings suggest that there is the likelihood of developing PTSD and other forms of psychological distress following defilement. PTSD may have dire consequences on the health status victims and they may be unable to perform certain activities.

The outcome of this study confirms that of Ashraf, Niazi, Masood and Malik (2019) who also detected an association between child abuse and post-traumatic stress disorder symptoms from their study. That is, children who reported high abuse exhibited high symptoms of PTSD. Furthermore the authors revealed that there was no gender difference in the occurrence of child sexual abuse, but women had a high score on PTSD symptoms relative to men. A similar finding was also found by McLaughlin, Brent and Hearmann (2018) and asserted that women were at greater risk of experiencing symptoms of PTSD than men following trauma. These gender differences manifest during puberty in symptoms and their underlying neurobiology, but it is still unclear if biological mechanisms can play a key role in producing gender differences (Bokszczanin, 2007).

Furthermore, findings of this study show that only a few number of the victims experienced mild to subclinical symptoms of PTSD with only two of the victims having no symptom of PTSD (below threshold). Those with mild to subclinical symptoms of PTSD may go unnoticed (not easily diagnosed) or may occur concurrently with other psychological distresses, leading to the development of a complex form of PTSD as revealed by McLean, Morris, Conklin, Jayawickreme and Foa, (2014).

Likewise, Kokonya, Kuria, Ong'echa, Mburu and Ndetei (2014) showed that defiled children experience deeper psychological distress (PTSD complex), which clearly indicates that while suffering in silence, the same children can become dysfunctional. This result indicates that there is a risk that PTSD will develop later in life for a survivor of defilement (child sexual abuse) who does not display any evidence of PTSD after the trauma.

For instance, Ullah, Campbell, Bhagat, Lyons and Tamanna (2017), asserted that a diagnosis of PTSD is made if the hallmark symptoms are present for at least 1 month after being subjected to a traumatic incident. Symptoms usually begin within 3 months of traumatic exposure, but can be delayed for months or even years until diagnostic requirements are met. They are listed as PTSD with delayed speech if the complete diagnostic criteria are not met until at least 6 months after the incident (Weathers, Marx, Friedman & Schnurr, 2014). This statement suggests that few of these victims who have endorsed moderate to subclinical PTSD symptoms may have certain PTSD symptoms but have not been able to qualify for a formal diagnosis.

Levels of Psychological Flexibility in Victims of Defilement

Findings from this study show that majority of the victim in the study demonstrated moderate levels of PF followed by one-third of the victims endorsing mild form of PF with only one of the victims validating high level of PF. Authoritarian parenting style has been shown to predict low level of PF in children (Williams, Ciarrochi, & Heaven, 2012). There is a possibility that parents or guardians of these victims may have been demonstrating control over their children that tend to restrict how well their children cope with

stressors in life. This possibility may contribute to majority of victims endorsing moderate instead of full flexibility as seen in other studies.

PF's core processes are split into six. The first four flexibility processes (acceptance, defusion, present moment and self-as-context) are an operational notion of mindfulness that overlaps with the definition of mindfulness by Kabat-Zinn (1990). The last two (values and committed actions) are taken to be commitment and behavioural change processes. Analysis of the various dimensions of psychological flexibility mostly utilised by the victims indicated that value is mostly employed by the victims followed by defusion and committed action with few of the victims utilising self-as-context.

Value clarifies what is important and provides a path for existence. (Kashdan & Rottenberg, 2010). In our part of the world, children and teenagers are continually taught principles for healthy growth, both in school and at home, and so it is possible that this is reason most of these victims use value in coping with life challenges (Ababio & Dumba, 2013). However, self-as-a-context tends to be one of Psychological Flexibility's hard-to-develop elements, and it is not unusual that it is the least Psychological Flexibility feature these victims use. From the age of three and a half to four, children begin to develop a true autobiographical memory or a strong sense of self that stretches into the future, with a private, conscious self that is distinct from the body and distinguished from it (Baressi, 2001; Povinelli, 1998). The antithesis of self-as-context is self-as-content. Rather than identifying oneself by the shifting content of one's emotions, feelings, and bodily sensations, self-as-context is the realisation that one is not the content of one's thoughts, but the one who experiences them (Gird, 2013).

The finding from this study deviates from study by Simon and Verboon (2016) who reported lower levels of Psychological Flexibiltiy with higher levels of psychological inflexibility among children, aged 8-10years, who were recruited through regular primary school in the Netherlands. The inconsistencies in the research findings could be associated to the difference in the research participants, the sample size of the study and the instrument used in measuring Psychological Flexibility.

Levels of Health Functioning among Victims of Defilement

The result from the analysis revealed that majority of the respondents experienced mild to moderate health functioning with only four experiencing low health functioning. A higher score on the WHODAS scale connotes a deteriorating health status or greater disability and a lower score is an indication of lesser disability. The findings suggest that majority of victims in the study developed mild to moderate health functioning following defilement. Health issues which are mostly encountered by victims of defilement were in getting along with people.

The findings of this study back up those of Sigurdardottir and Halldorsdottir (2018), who looked at a female child sexual abuse (CSA) survivor's lived experience of the physical health repercussions of CSA. Frequent vaginal and abdominal infections, widespread and chronic pain, repeated urinary tract infections, cervical dysplasia, fallopian tube inflammation, menorrhagia, endometrial hyperplasia, chlamydia, ovarian cysts, ectopic pregnancies, uterus issues, extreme adhesions, and ovarian cancer, sleeping problems, stomach problems, and chronic back problems were among the findings.

The findings of Mutavi, Mathai and Obondo (2017), who also enumerated negative physical health outcomes such as HIV/AIDS, unintended pregnancy, drug trafficking and mental retardation as health implications of defilement in their research, are also verified by the results of this report. Girgira, Tilahun and Bacha (2014) also highlighted from their research that most children subjected to child sexual abuse had hymenal tear and signs of urinary tract infection as adverse physical health outcomes of child sexual abuse.

Other psychological health issues, such as anxiety, fear of males, poor academic performance, depression, and nightmares, may also contribute to these physical health issues. Murat et al. (2015), for example, looked at the psychological effects of sexual abuse and related factors in children and teens referred to the child and adolescent psychiatry clinic by official medico-legal institutions. According to the findings, abuse-related mental diagnoses were made in 77.6% of cases (in which 45.9% were major depressive disorder and 31.7% were cases of post-traumatic stress disorder). That is, physical health results can have an impact on mental health.

The worst role with which most victims had trouble getting along was further examination of the different aspects of health functioning. That is, the victims of this research have trouble connecting with others. The result is in line with the outcome of the Mutavi, Mathai and Obondo (2017) research. Their studies found that victims of defilement suffer low self-esteem, depression, and weak social interactions. Similar to Mbaluka's (2019) results, which revealed that girls felt highly stigmatized by family, peers and the general society, withdrawal from regular life activities, which in most cases

leads to post-traumatic stress disorder, depression, suicidal thoughts, anxiety, among others.

Relationship between PTSD and Health Functioning of victims of defilement

Research has established that most people who experience PTSD will have a spontaneous recovery, but about 10% will continue to get worse. Findings from this research showed that there is a positive correlation between PTSD and the functioning of health. As symptoms of PTSD increases, scores of health functioning also increases and vice versa. Individuals health deteriorate with increased scores of health functioning. This means that higher PTSD levels are associated with poorer health outcomes, as sufferers with PTSD symptoms of defilement improve, their health deteriorates. Thus the influence of PTSD can extend to health-related daily functioning beyond psychological symptoms.

Empirical research supports the simultaneous relationship between PTSD and health functioning. Even after accounting for demographic characteristics, war and chemical exposure, and health risk behaviours, Jakupcak, Luterek, Hunt, Conybeare, and McFall (2008) found that PTSD symptom severity was highly connected with lower health functioning.

Such results demonstrate the impact of PTSD on physical health. Vasterling et al. (2007) had similar results. Vasterling et al. (2007) analysed longitudinal associations between the symptomatology of PTSD and health-related functioning of the sample of Iraq war veterans seeking non-treatment. The findings showed that the symptoms of PTSD appear to negatively affect

the functioning of physical health by their detrimental effects on health symptoms, which in turn have a negative influence on day-to-day functioning.

Smith, Egert, Winkel, and Jacobson investigated the connection between PTSD and pain severity and pain-related interference in HIV-infected people with chronic pain (2002). Over the course of their lives, individuals reported being exposed to an average of 6.3 distinct types of trauma, with HIV diagnosis being one of the most painful. Those with PTSD also reported significantly higher pain intensity and pain-related interference in daily activities (work, sleep, walking ability, and general activity) and effect (mood, other people's relationships, and enjoyment of life) over time than those who did not meet the diagnostic criteria.

In a similar vein, Van Zelst, De Beurs, Beekman, Van Dyck, and Deeg (2006) examined the impact of PTSD and sub-threshold PTSD on everyday living, well-being, and health-care utilisation in a community-based sample of the older population in the Netherlands. Even when other illnesses or functional restrictions were taken into account, the study found that PTSD or sub threshold PTSD participants spent more days in bed owing to illness and had more days of impairment. They were generally dissatisfied with life, relied on health care largely for somatic relief, and rated the care they received as unsatisfactory. This means that even those who score below the threshold for mild PTSD symptoms should be continuously monitored.

On the contrary, Asnaani et al., (2018) results found that PTSD severity was not correlated with poorer physical health functioning when a study of Iraq and Afghanistan war veterans explored the relationship between posttraumatic stress and physical health functioning. The inconsistencies in the

research findings could be associated to the difference in the research participants, the sample size of the study and how PTSD was measured. Also, these studies focused on different related trauma causing PTSD. However, resilience and positive psychology could have contributed to the reason why some trauma victims do not develop PTSD.

Again, the outcome of this study showed that re-experience and avoidance were not significant predictors of health functioning. However, hyperarousal was the only significant predictor of health functioning, this means that as victims of defilement experience increase in hyperarousal symptoms, their health functioning deteriorates. Likewise, analysis of the levels of health functioning among victims showed that majority of them experienced mild to moderate health functioning. This implies that as levels of hyperarousal which was the only predictor of PTSD increases, health functioning also deteriorates.

This finding is in line with that of Asnaani et al., (2018), who found that a cluster of hyperarousal symptoms was associated with lower physical health functioning but not mental health, and that the severity of PTSD was not connected with poorer physical health functioning. Instead, Asnaani, Reddy, and Shea (2014) discovered that PTSD criterion B (re-experiencing) symptoms exclusively predicted lower physical health functioning and more body pain, whereas criterion D (hyperarousal) symptoms exclusively predicted lower energy/vitality sensations and weaker mental health experiences.

Relationship between Psychological Flexibility and Health Functioning of victims of defilement

In this study, psychological flexibility was an important variable of concern. Literature suggested psychological flexibility is vital because, it gives us consistency in an ever-changing environment. Psychological Flexibility can affect your health directly or indirectly by modifying habits that affect your health, such as eating, sleeping and socializing, or by causing changes in your hormones and/or heart rate directly or indirectly.

In contrast, findings from this study showed no significant relationship between Psychological Flexibility and health functioning among the victims of defilement. That is as psychological flexibility increases, health functioning scores also increases and the health status also deteriorate. This implies that psychological flexibility did not influence health functioning outcomes among the victims of defilement. The findings of this research are inconsistent with previous studies that indicate that resilience factors are psychological flexibility and that pain acceptance buffers the negative effect of pain severity after a traumatic event.

In a group of adolescents with cognitive, emotional and behavioural difficulties (SEB), Beeckman et al., (2019) investigated the Psychological Flexibility factor structure, as well as the relationship between psychological flexibility and demographic variables, mental health and functioning variables in school and further adolescent Psychological Flexibility studies. Beeckman et al. (2019) found that the quality of life (QoL) and peer support for learning were significantly predicted by Psychological Flexibility (school commitment). Gentili et al. (2019) also analysed Psychological Flexibility as a

resilience factor among 252 adults with chronic pain applying for inclusion in a digital self-help treatment focused on ACT in relation to symptoms and functioning. Again, Gentili results do not agree with the findings of this report. Gentili found that when controlling for age, pain and anxiety, Psychological Flexibility significantly contributed to the prediction of pain interference and depression. Participants with low levels of Psychological Flexibility were also more likely to be absent from work. While the findings confirm prior research and demonstrate the importance of Psychological Flexibility as a resilience element for those suffering from chronic pain and anxiety, they contradict the findings of this study. This could be due to differences in sample size and how psychological distress was measured. These research have also focused on defilement victims.

Relationship between Psychological Flexibility and PTSD following defilement

The results of this study showed that there was no significant relationship between Psychological Flexibility and PTSD. As psychological flexibility increases, PTSD symptoms among victims decrease. However all of psychological flexibility's behavioural processes (six dimensions) including commitment, defusion, values, acceptance, present moment except self-as-context, did not predict PTSD outcome.

The findings of this study on the link between psychological flexibility and PTSD are similar to those of Richardson and Jost (2019). In a sample of 240 undergraduates who had undergone at least one trauma, Richardson and Jost investigated the role of psychological flexibility in the development of depression and PTSD following early life trauma. Early childhood

interpersonal trauma (ELT) is linked to depression and PTSD, according to Richardson and Jost (number of traumas and negative effects of trauma). In people who had experienced more traumas, greater psychological flexibility was linked to less negative consequences. Psychological flexibility was connected to less psychological symptoms (both depression and PTSD), as expected. This means that people with greater psychological flexibility may be less affected by psychological trauma, such as PTSD.

The findings of this study are similarly consistent with those of Boykin, Anyanwu, Calvin, and Orcutt (2019), who investigated whether differences in psychological flexibility influenced Post-Traumatic Stress Symptoms (PTS) and perceived Post-Traumatic Growth (PTG) as increased event centrality. Low psychological flexibility was linked to greater PTS intensity as event centrality increased, according to Boykin, Anyanwu, Calvin, and Orcutt (2019). The results of Boykin, Anyanwu, Calvin and Orcutt agree with those of Dick, Niles, Lane, DiMartino and Mitchell (2014). For 38 women who correlate post-treatment PTSD symptoms with symptoms of posttraumatic stress disorder, Dick, Niles, Lane, DiMartino and Mitchell investigated potential mechanisms for (PTSD). Increases in PF were linked to a reduction in PTSD symptoms, according to their research. Meyer et al. (2019) evaluated whether greater levels of psychological inflexibility predicted distinct variance in the severity of PTSD symptoms after accounting for the strongest established risk variables for PTSD in 236 U.S. veterans at 1-year follow-up in the Iraq and Afghanistan conflicts. After controlling for the strongest predictors, Meyer et al. discovered that higher baseline

psychological inflexibility predicted a specific variance in 1-year PTSD symptom intensity.

Psychological flexibility as a moderator in the relationship between PTSD and Health Functioning

As literature has indicated that it may have an effect on the relationship between PTSD and health functioning, psychological flexibility was a significant variable of concern; thus this role of moderation was tested. The findings from the moderation analysis suggested psychological flexibility does not moderate the relationship between PTSD and health function. The presence of PF did not enhance (where an increase in PF increased the effect of PTSD on health functioning), buffer (where an increase in psychological flexibility decreased the effect of PTSD on health functioning); or antagonize (where an increase in PF would reversed the effect of the PTSD on health functioning). This does not however suggest that psychological flexibility is not important because psychological flexibility has been proven essential in helping individuals cope with stressful or adverse situations.

The results of the current study are similar to the findings of Beeckman et al., (2019). Beeckman et al., (2019) found that the general psychological flexibility level of a child did not moderate the association between the severity of pain in the child and the outcome of the child. While there is evidence of psychological flexibility as a possible regulator of event centrality in a variety of observational studies, this current research has not seen the same result. For instance, the findings of Dutra and Sadeh (2018) who assessed negative urgency, aggressive behaviour and the role of PF among trauma-exposed veterans differs from findings of this study. Dutra and Sadeh

found that PF showed moderation in the relationship between negative urgency and aggressive behaviour, such that at high levels of psychological flexibility, negative urgency was less strongly correlated with aggressive behaviour. Dutra and Sadeh concluded that PF is a potentially valuable therapeutic capacity among trauma-exposed individuals to suppress externalizing behaviour.

The moderating effect of psychological flexibility in the relationship between possible PTSD diagnosis and pain interference in everyday life was also tested by Berghoff, McDermott, and Dixon-Gordon (2018). While Berghoff, McDermott and Dixon-Gordon concentrated on possible patients with PTSD, they also examined how the relationship between PTSD and pain interference in everyday life was supported by PF. The findings of this current study do not coincide with the findings of Berghoff, McDermott, and Dixon-Gordon. Berghoff, McDermott, and Dixon-Gordon found that psychological flexibility demonstrated moderation, as it interacted significantly with probable PTSD on the pain interference outcome. Berghoff, McDermott, and Dixon-Gordon argued that the negative effect of PTSD on pain lessened upon PTSD interaction with PF as a moderator.

Shepherd, Reynolds, Turner, O'Boyle, and Thompson investigated the moderating effect of psychological flexibility on the connection between recognised risk factors and physical, mental, and emotional well-being (2019). Psychological flexibility consistently attenuated the connection between stress and all measured outcomes, according to Shepherd, Reynolds, Turner, O'Boyle, and Thompson.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Overview

The goal of the research was to see if PF played a role in the association between PTSD and health function in victims of defilement in the Greater Accra Region. The victims' levels of PTSD, health functioning, and PF were also investigated in the study. This chapter contains an overview of the research, as well as the findings and recommendations.

Summary

The study investigated the moderating role of PF on the relationship between PTSD and Health Functioning of victims of defilement in the Greater Accra Region. The study further explored the levels of PTSD, Health Functioning as well as levels of PF among the victims. The study was driven by seven purposes which were translated into three research questions and four hypotheses. The study employed the cross-sectional design. The population for this study comprised all defilement victims in the greater Accra region between 7-16 years. The study, however, targeted victims who report to the Accra regional DOVVSU unit, those receiving treatment at the police hospital as well as victims around chorkor, Korle-Gonno, Sempe and James town. Using multiple sampling methods, convenience and snowballing, a total of 87 victims were engaged in the study.

Questionnaire which comprised scales from the other researches were adapted and used for the study. These scales are namely, Child PTSD Symptom Scale (CPSS), Children's Psychological Flexibility Questionnaire (CPFQ) and World Health Organisation Disability Assessment Schedule 2.0

(WHODAS 2.0). The data collected were analysed using descriptive statistics-frequencies, percentages, means and standard deviation; and inferential statistics--multiple linear regression and moderation analysis with Hayes' PROCESS. The bootstrap approach was used for all the inferential analyses.

Key Findings

The following findings emerged from the study:

1. Victims of defilement who participated in the study had moderate to severe PTSD. Most of the respondents recorded more of hyperarousal symptoms followed by avoidance then re-experiencing symptoms.
2. Victims recorded having levels of psychological flexibility. However, majority of the victims portrayed mild to moderate levels of psychological flexibility. The most predominately used components of psychological flexibility used by the victims were values and the least used was self-as-context.
3. Majority of the victims experienced moderate health functioning with few of them experiencing low health functioning. Victims functioned best in self-care and the poorest was getting along.
4. Re-experience, avoidance, and hyperarousal accounted for 9.7% of the variance in health functioning. Among the three dimensions of PTSD, hyperarousal was the only major predictor of health functioning ($\beta = .33$, $p = .011$). That is, as victims of defilement experience increase in hyperarousal, their health functioning deteriorates. Hence a significant relationship exists between PTSD and Health Functioning of victims of defilement.

5. Present moment, self-as-context, acceptance, values, defusion, and commitment of psychological flexibility were not significant predictors of health functioning.
6. Among the six dimensions of psychological flexibility: present moment, self-as-context, acceptance, values, defusion and commitment, only self-as-context was a significant predictor of PTSD ($\beta = .30$, $p = .009$). In all, psychological flexibility was not a significant predictor of PTSD.
7. The interaction between PTSD and psychological flexibility was statistically significant, however, interaction between PTSD and psychological flexibility did not significantly predict health functioning.

Conclusions

The result of this research confirms the prevalence of defilement in the Greater Accra region in the wake of attempts to resolve the issue. Many of these victims of defilement suffer from PTSD which may affect their health functioning. Psychological flexibility did not influence the relationship between PTSD and health functioning of these victims of defilement. This situation could be due to other variables such as resilience and positive psychology in which victims may have utilized.

Recommendations

Based on the findings of this study, it is recommended that:

1. In order to avoid health risks, early detection and prompt treatment of violence and PTSD symptoms in children and adolescents with a history of defilement is important. Victims without any sign of psychological distress after defilement should be closely monitored as they can develop of PTSD symptoms later in life.

2. Therapists such as clinical health psychologist should also focus on helping victims develop their PF through acceptance and commitment therapy. Helping victims build PF has the tendency of protecting victims against psychological distress following defilement.
3. Periodic and continuous assessment of victims of defilement diagnosed with PTSD is necessary as increased in PTSD leads to a more deteriorating health functioning.
4. The psychological, social and physical effects of children and adolescents subjected to defilement abuse must also be regularly assessed.
5. Education on defilement must be deepened in churches, schools targeting both primary and Junior high schools as most victims found to be enrolling at that level of education. Children must be empowered to report incidence of defilement despite threats from perpetrators. Parents and guardians and the general public must also be involved in the education to identify signs of sexual abuse in their wards.
6. Intensify education to help reduce public stigma against victims of defilement. Several programs have been organised to educate the public on how stigma can serve as a hindrance to seeking psychological support. Yet, it seems that the education has not had the desired effect. For this reason it is important to intensify the education in order to help people understand the psychological trauma that victims of defilement go through better and need to seek psychological support if need be.as revealed from the study. Victims of defilement have issues relating with people they are not familiar with and

maintaining relationship with others. Therefore stigmatising against them may aggravate the situation.

7. Health care professionals including clinicians, doctors and nurses should educate family and friends on the need to provide emotional and social support for victims of defilement. This is because social support has been proven to be an important aspect of health and well-being (APA, 2014). They have to relate with them in such a way that they feel less guilty of the situation.
8. Psychologists should periodically visit and assessment should be carried out to assess victim's health functioning after psychological therapy sessions have been terminated. This can be done by including community mental health nurses in the care.

Suggestions for Further Research

1. It is recommended that this study be replicated in different parts of the country in order to facilitate nationwide generalisation.
2. Psychological flexibility, PTSD and health function should be studied in other group of traumatised victims such as rape victims, victims of arm robbery attacks, accident survivors and even among professionals who come into contact with victims of trauma in the line of their duty.
3. The role of psychological flexibility in decreasing other psychosocial issues should also be considered in future research.
4. A mixed method approach should be adopted in conducting a similar study to make for the insufficiencies in the quantitative study approach adopted by this study.

5. Factors that contribute to unreported cases of defilement by victims should also be examined by researchers in the area.
6. Study initiatives should focus on strategies to alleviate psychosocial problems such as symptoms of PTSD, depression/anxiety, somatic concerns, low functioning, and perceptions of shame and bad community ties for survivors of sexual violence from a public health point of view.
7. Further research is also needed to establish and assess strategies to improve attitudes towards survivors of sexual assault and to counter misconceptions about sexual violence and its implications.

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APPENDIX A

QUESTIONNAIRE

INTRODUCTION AND CONSENT

This questionnaire seeks to conduct a study on role of psychological flexibility in the relationship between posttraumatic stress disorder (PTSD) and the health functioning of victims of defilement. I would like to ask you some questions related to defilement, which will take you about 45 minutes to complete. Participation in this study is voluntary and you can choose not to answer any individual question or all of the questions.

SECTION A

1. Age (as at last birthday) …….. years
2. Sex: 1. Male [ ] 2. Female [ ]
3. Have you had any form of formal education? 1. Yes [ ] 2. No [ ]
4. What is your highest level of education? 1. Primary [ ] 2. JHS/Middle School [ ]SHS [ ]
5. Which religion do you belong to? 1. Christianity [ ] 2. Muslim [ ] 3. Traditionalist [ ]

   Others …….

SECTION B

Below is a list of problems that kids sometimes have after experiencing an upsetting event. Read each one carefully and circle the number (0-3) that best describes how often that problem has bothered you **IN THE LAST 2 WEEKS**.

Not at all or only at one time (0); Once a week or less/ once in a while (1); 2 to 4 times a week/ half the time (2); 5 or more times a week/almost always (3)

NO	Frequency	0	1	2	3
1	Having upsetting thoughts or images about the event that came into your head when you didn't want them to				
2	Having bad dreams or nightmares				
3	Acting or feeling as if the event was happening again (hearing something or seeing a picture about it and feeling as if I am there again)				
4	Feeling upset when you think about it or hear about the event (for example, feeling scared, angry, sad, guilty, etc)				
5	Having feelings in your body when you think about or hear about the event (for example, breaking out into a sweat, heart beating fast)				
6	Trying not to think about, talk about, or have feelings about the event				
7	Trying to avoid activities, people, or places that remind you of the traumatic event				
8	Not being able to remember an important part of the upsetting event				
9	Having much less interest or doing things you used to do				
10	Not feeling close to people around you				
11	Not being able to have strong feelings (for example, being unable to cry or unable to feel happy)				
12	Feeling as if your future plans or hopes will not come true (for example, you will not have a job or getting married or having kids)				
13	Having trouble falling or staying asleep				
14	Feeling irritable or having fits of anger				
15	Having trouble concentrating (for example, losing track of a story on the television, forgetting what you read, not paying attention in class)				
16	Being overly careful (for example, checking to see who is around you and what is around you)				

17	Being jumpy or easily startled (for example, when someone walks up behind you)				

SECTION D

Read the following questions carefully. For each one, please put a tick in the box, which best describes your reaction to situation.

Never (0); A little (1); Sometimes (2); A lot of time (3); All the time (4)

NO	Statements	0	1	2	3	4
1	I always notice things around me and what people say					
2	If I think something, that doesn't mean it's true					
3	There are things that I really care about.					
4	If I do something bad, then I am a bad person					
5	I notice when my body feels different.					
6	When I mess up, I get mad at myself					
7	Nothing matters that much to me.					
8	If I cry it means that I'm wrong or bad					
9	It's OK to be scared					
10	I notice my thoughts and feelings, but that is not me.					
11	I miss seeing stuff happen or hearing what people say.					
12	My thoughts don't make me do what I do.					
13	Everything I think and feel must be real.					
14	It's OK to feel mad.					
15	I know what I want to work for today					
16	If I lose I try again right away to do better.					
17	I give up when things are too hard					
18	I worry a lot about stuff I did or need to do					
19	If I get angry, it means I messed up					
20	My thoughts and feelings tell me what to do.					
21	I am what other people say about me					
22	If I did something wrong, that doesn't make me bad					
23	Grown-ups tell me what is important to me					
24	I try really hard every day.					

SECTION E

Think back over the past 30 days and answer these questions, thinking about how much difficulty you had doing the following activities. For each question, please thick only one response.

Never (0); Mild (1); Moderate (2); Severe (3); Extreme or cannot do (4)

In the past 30 days, how much difficulty did you have in:

NO	Statements	0	1	2	3	4
1	Standing for long periods such as 30 minutes?					
2	Taking care of your household responsibilities?					
3	Learning a new task, for example, learning how to get to a new place?					
4	How much of a problem did you have joining in community activities (for example, festivities, religious or other activities) in the same way as anyone else can?					
5	How much have you been emotionally affected by your health problems?					
6	Concentrating on doing something for ten minutes?					
7	Walking a long distance such as a kilometre [or equivalent]?					
8	Washing your whole body?					
9	Getting dressed?					
10	Dealing with people you do not know?					
11	Maintaining a friendship?					
12	Your day-to-day work?					

APPENDIX B

ETHICAL CLEARANCE

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: [illegible]
Your Ref: .....
Date: [illegible]

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

Chairman, CES-ERB
Prof. J. A. Omotosho
jomotosho@ucc.edu.gh
0243784739

Vice-Chairman, CES-ERB
Prof. K. Edjah
kedjah@ucc.edu.gh
0244742357

Secretary, CES-ERB
Prof. Linda Dzama Forde
lforde@ucc.edu.gh
0244786580

The bearer, [illegible], Reg. No. [illegible] is an M.Phil. / Ph.D. student in the Department of [illegible] in the College of Education Studies, University of Cape Coast, Cape Coast, Ghana. ~~He~~ / She wishes to undertake a research study on the topic:

[illegible]

The Ethical Review Board (ERB) of the College of Education Studies (CES) has assessed his/her proposal and confirm that the proposal satisfies the College's ethical requirements for the conduct of the study.

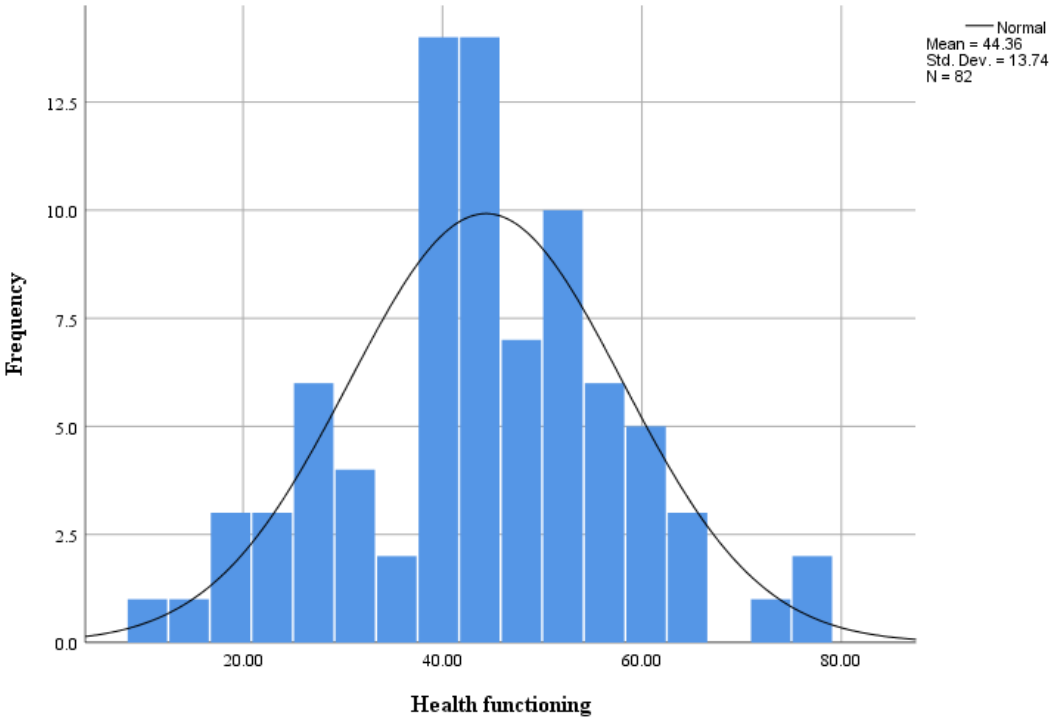
In view of the above, the researcher has been cleared and given approval to commence his/her study. The ERB would be grateful if you would give him/her the necessary assistance to facilitate the conduct of the said research.

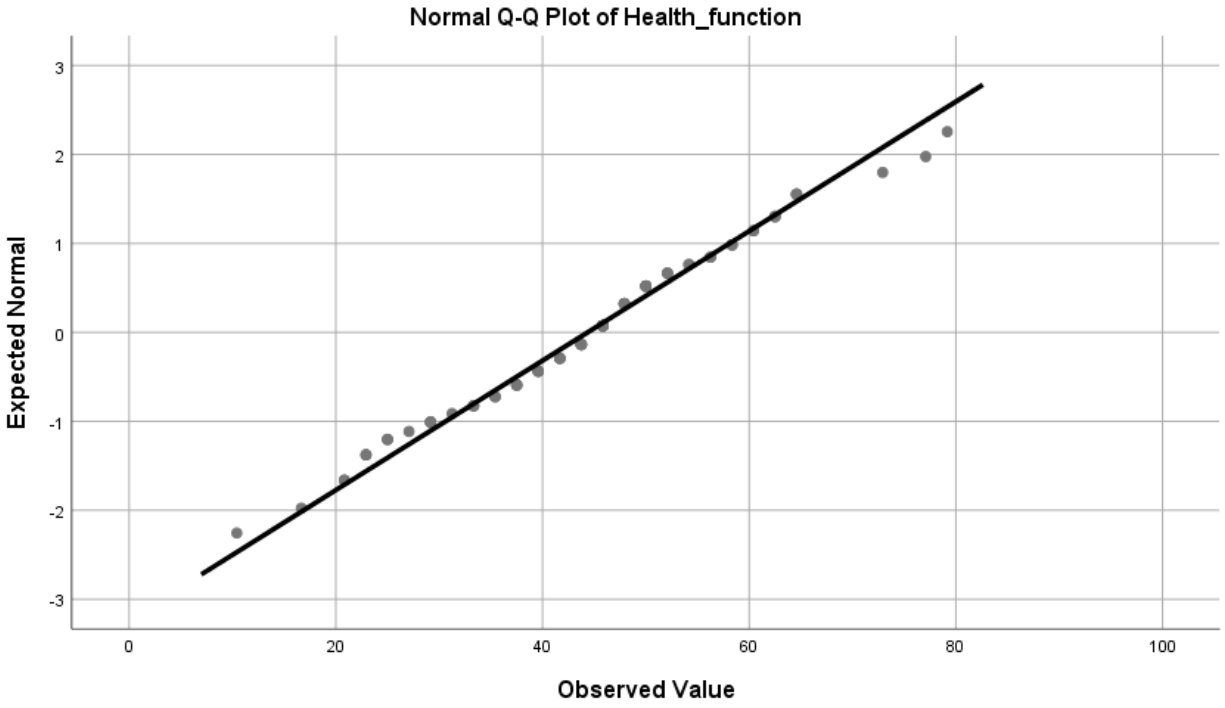
Thank you.
Yours faithfully,

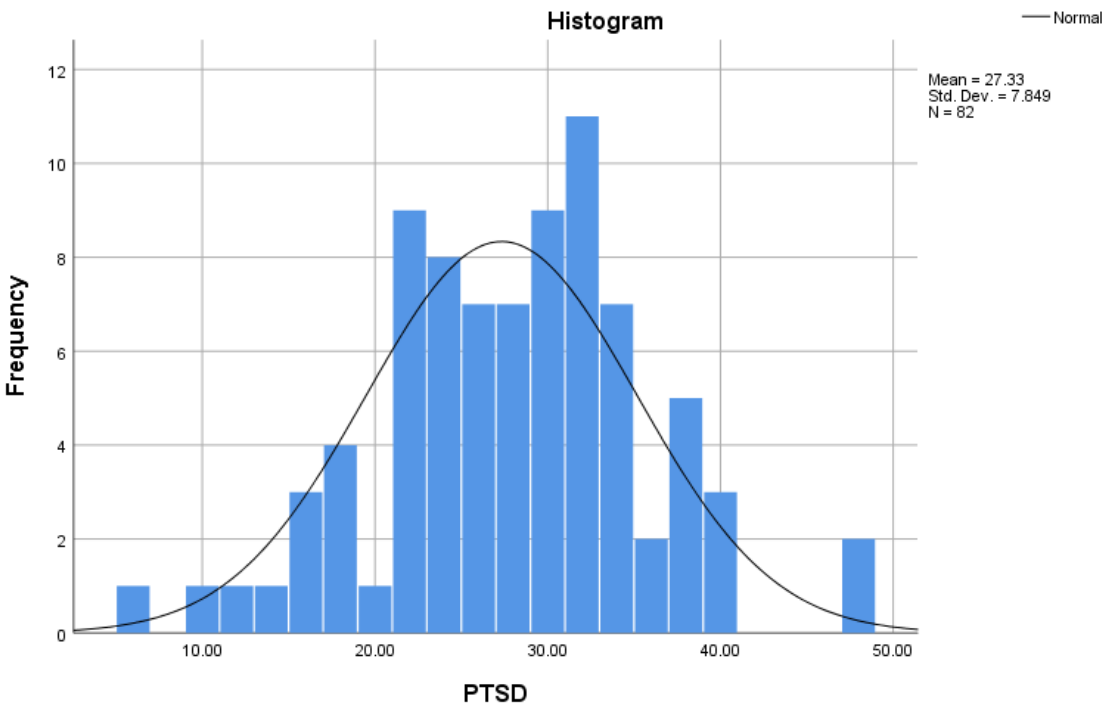
Prof. Linda Dzama Forde
(Secretary, CES-ERB)

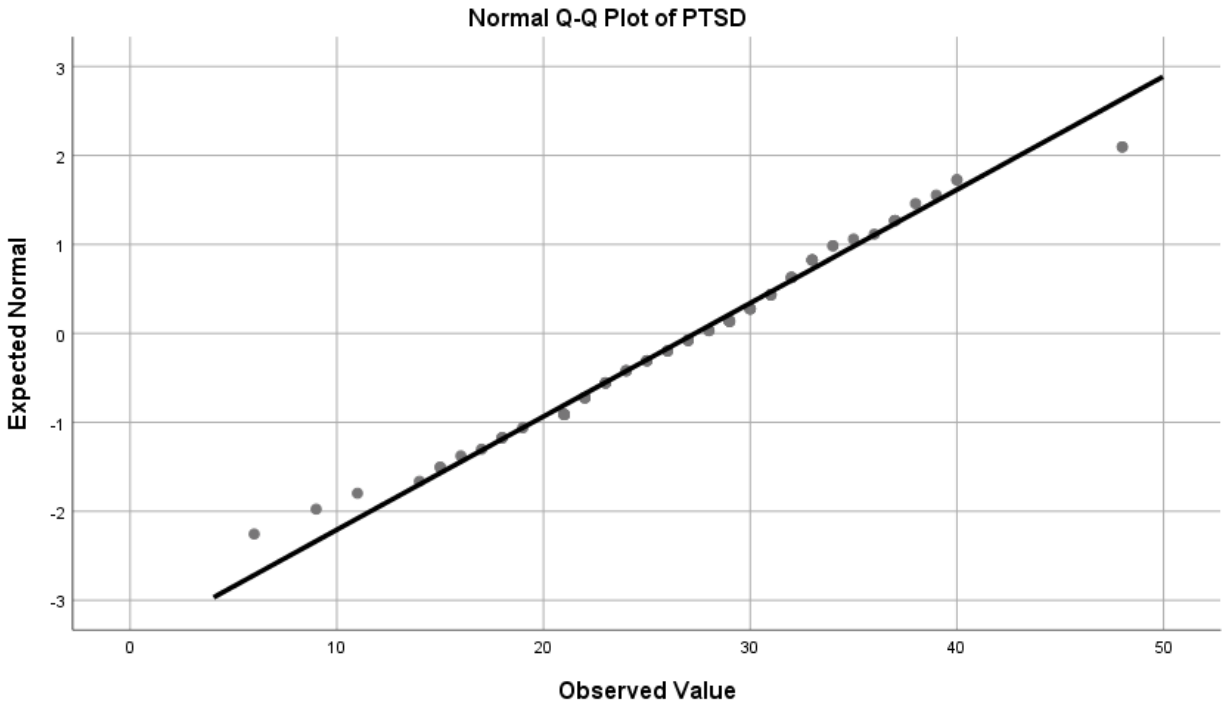
APPENDIX C

NORMALITY TESTS



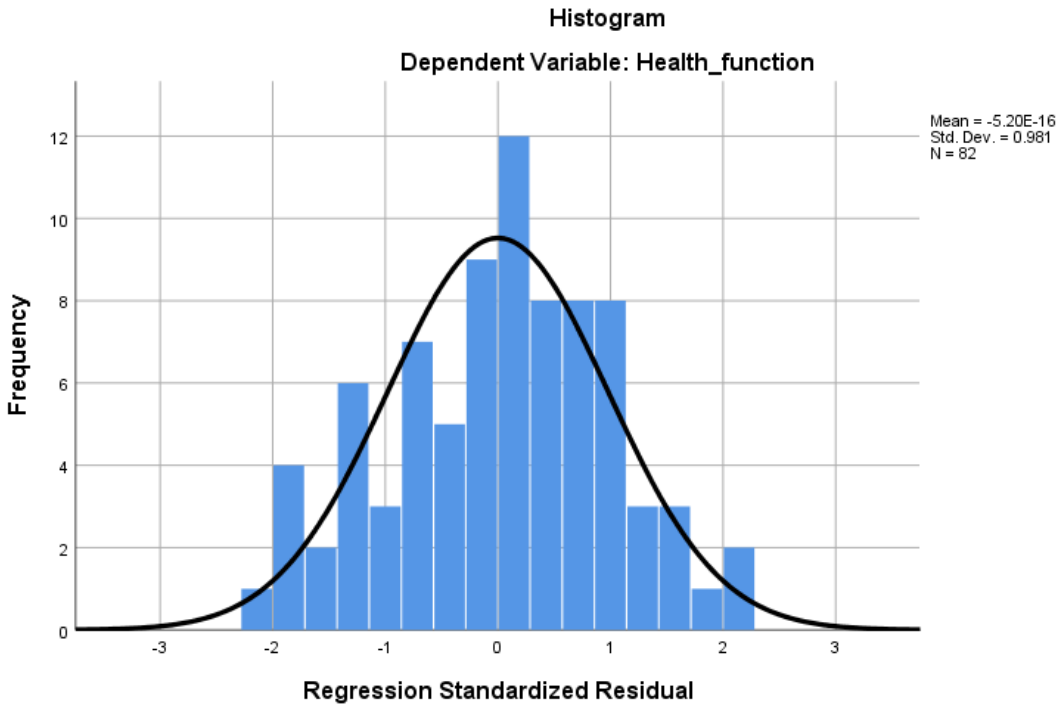


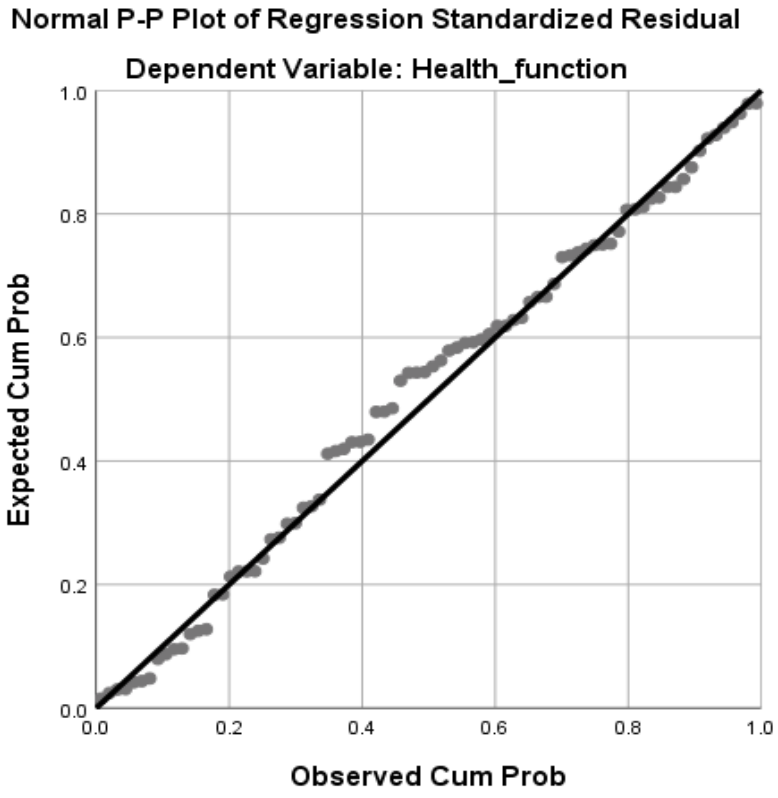


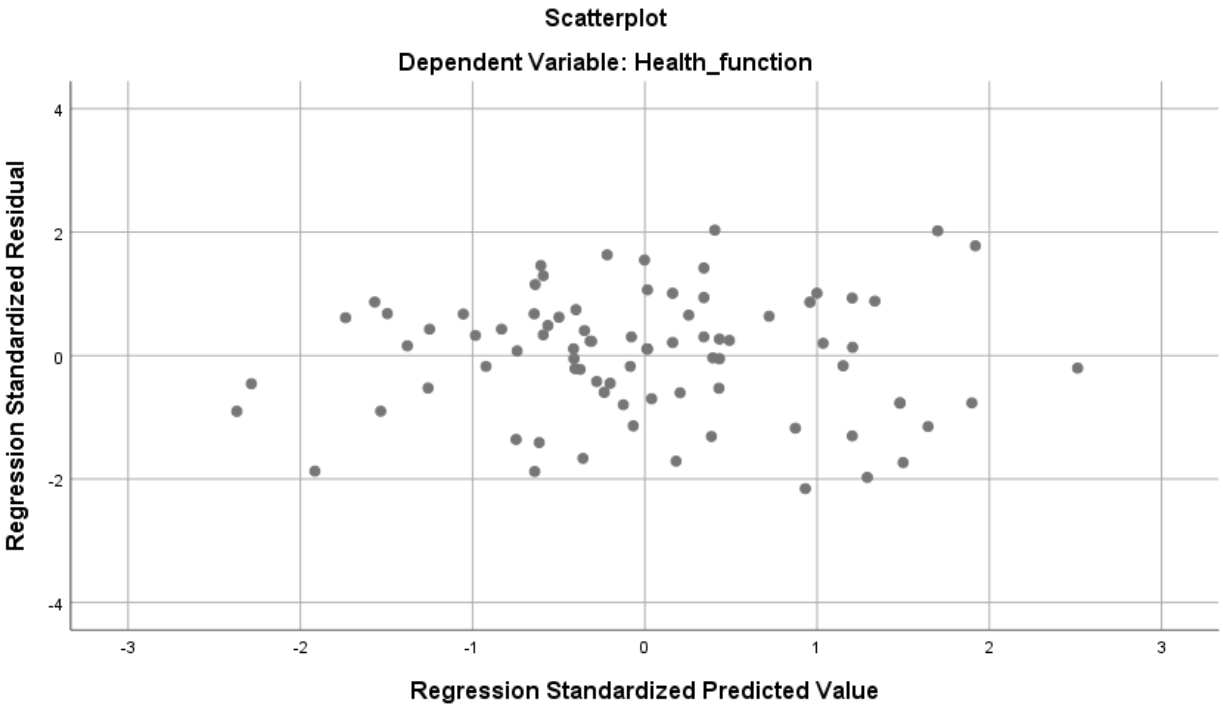


APPENDIX D

LINEARITY, HOMOSCEDASTICITY, AND NORMALITY

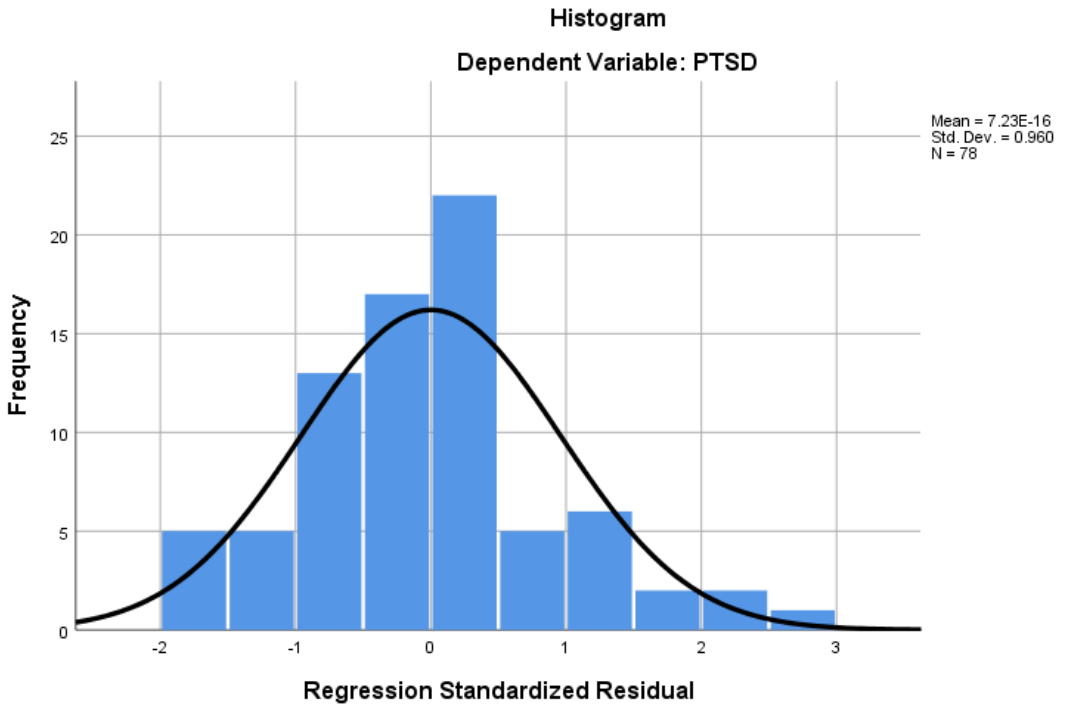


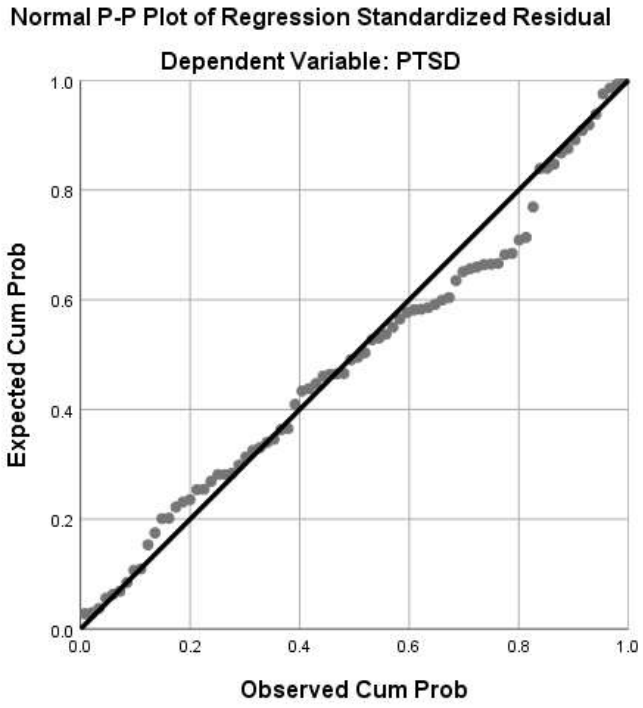


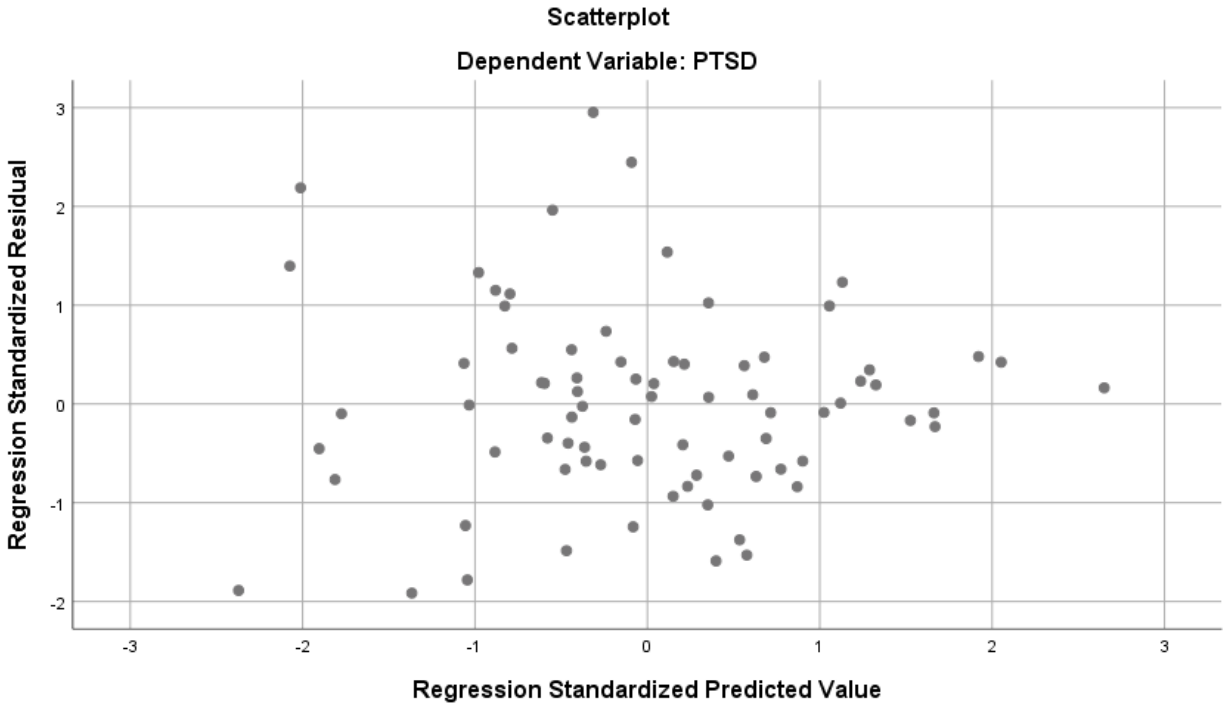


APPENDIX E

LINEARITY, HOMOSCEDASTICITY, AND NORMALITY FOR PTSD







APPENDIX F

CONSENT FORM

Title: Role of psychological flexibility in the relationship between posttraumatic stress disorder and health functioning of victims of defilement.

Principal Investigator: Emma Eshun

Department of Education and Psychology

University of Cape Coast

0246767797

eshun.emma@stu.ucc.edu.gh

Address: University of Cape Coast

PURPOSE OF STUDY

The purpose of this study is to examine the role of psychological flexibility in the relationship between posttraumatic stress disorder and health functioning of victims of defilement.

Possible Benefits

There will be no direct benefit to you for your participation in this study. However, we hope that the information obtained from this study may be shared with personnel who are involved in managing victims of defilement as well as the public and participants (victims of defilement). This will educate them on the role of psychological flexibility the development of PTSD and health outcomes of victims of defilement. This will help the clinical psychologist to consider this in their treatment plans and regimen. The information generated, will help in policy formulation by the Ministry of Health (MOH) and DOVVSU units to promote the consideration of the psychological aspect in handling cases of defilement.

Confidentiality

- Your responses to this survey will be anonymous. Every information about you will be protected and you will not be named in any reports or journal or magazine. Every effort will be made by the researcher to preserve your confidentiality including:

- assigning code names/numbers for participants that will be used on all research notes and documents

- keeping notes, interview transcriptions, and any other identifying participant information in a locked file cabinet in the personal possession of the researcher.]

Your data will be kept confidential except in cases where the researcher is legally obligated to report specific incidents. These incidents include, but may not be limited to, incidents of abuse and suicide risk.

Contacts for Additional Information

If you have questions at any time about this study, or you experience adverse effects as the result of participating in this study, you may contact the researcher whose contact information is provided on the first page. If you have questions regarding your rights as a research participant, or if problems arise which you do not feel you can discuss with the Primary Investigator, please contact the following people for further information about the research. Dr. Krafona 0541078770 and Dr. Irene Vanderpuye 0507652689.

Voluntary Participation and Right to Leave the Research

Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you decide to take part in this study, you will be asked to sign a consent form. After you sign the consent form, you are still free to withdraw at any particular point in time and without giving a reason. Withdrawing from this study will not affect the relationship you have, if any, with the researcher. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

CONSENT

I have read and I understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

Participant's signature _____Date _____

Investigator's signature _____Date _____

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered, and the volunteer has agreed to take part in the research.

_____ _____

Date Name and signature of witness