UNIVERSITY OF NAIROBI

Meaning making and Posttraumatic Stress Disorder in the Cameroonian context: Personal and Community Sense of Coherence in Internally Displaced Persons from the North West and South West Regions

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DEPARTMENT OF PSYCHIATRY

DECLARATION

I declare that this work is original and has been authored by me. It has not been submitted for an academic award or qualification in any institution of higher learning. Appropriate referencing has been made when citation of other people's work has been done.

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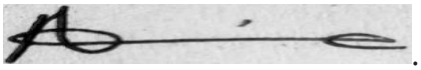
Signature ....  .....

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DEDICATION

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LIST OF ACRONYMS

GDP: Gross Domestic Products

IDPs: Internally Displaced Persons

HaRO: Hope and Rehabilitation Organisation

NW: North West

OCHA: United Nations Office for the Coordination of Humanitarian Affairs

PTSD: Posttraumatic Stress Disorder

SOC: Sense of Coherence

SOCC: Community Sense of Coherence

SW: South West

TCC : Trauma Centre Cameroon

UNHCR: United Nations High Commissioner for Refugees

OPERATIONAL DEFINITIONS

Community Sense of Coherence: An individual's perception of his/her community regarding the three components of SOC: Comprehensibility, Manageability and Meaningfulness.

Internally Displaced Person: Any individual who has been uprooted from his home, community because of conflict or disaster and has not crossed the frontiers in search of settlement.

Posttraumatic Stress Disorder: This is a psychiatric condition characterised by cognitive, emotional, behavioural and perceptual disturbances consecutive to the experience of traumatic event (s).

Salutogenesis: A theory that explains the factors contributing to the promotion and maintenance of physical and mental well-being rather than disease with particular emphasis on the coping mechanisms of individuals which help preserve health despite stressful conditions.

Sense of Coherence: A global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feelings of confidence that stimuli deriving from one internal and external environment in the course of living are structure, predictable and explicable; the resources are available to one to meet the demand posed by these stimuli; and these demands are challenges worthy of investment and engagement.

Trauma load: Number of traumatic events experienced.

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ABSTRACT

Introduction: Cameroon has been experiencing state-based conflicts for almost a decade, in the Far North, North West (NW) and South West (SW) regions. Literature on effects of conflicts on population is consistent regarding the potential development of clinically significant impairment. Also, studies have shown the influence of protective factors in yielding a different trajectory after experiencing life threatening events. Sense of Coherence (SOC) and Community Sense of Coherence (SOCC) are parts of those salutary factors.

Objective: This study aimed at comparing the relationship between Posttraumatic Stress Disorder (PTSD), Personal and Community Sense of Coherence in Internally Displaced Persons (IDPs) belonging to communities in the North West and South West regions of Cameroon.

Study design: Cross-sectional study

Method: IDPs aged 18 and above belonging to communities in the North West and South West regions of Cameroon were systematically sampled from two local NGO based in Yaounde: Trauma Centre Cameroon (TCC) and Hope and Rehabilitation Organization (HaRO) . The research questionnaire made of Trauma event Checklist, Posttraumatic Stress Disorder Checklist-5, Orientation to Life Questionnaire-SOC 13, Community Sense of Coherence Questionnaire and a Sociodemographic was administered to 172 participants. Data was analysed using stata version 16. Participant characteristics, trauma

events, PTSD, personal and community coherence variables was presented in a tabular form. Bivariate and multivariate logistic regression was used to determine the influence of the independent variables on PTSD. Associations was reported by use of odds ratios with their 95% CI. Statistical significance was taken at $p < 0.05$.

Results: Ninety-four percent (94%) of participants were screened positive for PTSD. Sixty two percent (62%) had a weak Personal Sense of Coherence and thirty-eight percent (38) had a weak Sense of Community Coherence. There was a negative correlation between PTSD and Personal SOC. No correlation between PTSD and Community SOC. Weak Correlation between SOC and SOCC

Chapter 1 INTRODUCTION

The 2020 Global Trends Report of the United Nation High Commissioner for Refugees (UNHCR) indicates that about eighty two (82) million individuals were forcibly displaced in the world. This represent a proportion of 1058 displaced persons per 100 000 inhabitants, and more than a half of them were Internally Displaced (UNHCR, 2000). An Internally Displaced Person (IDP) is any individual who has been uprooted from his home, community because of conflict or disaster and has not crossed the frontiers in search of settlement (Deng, n.d.). In 2020 the number of IDPs was estimated at 619 per 100 000 inhabitants (48 million) with the majority coming from Colombia,15 722 IDPs per 100 000 inhabitants, representing 8 millions (Council on Foreign Relations, n.d.). In Sub-Sarahan Africa, the number of forcibly displaced individuals registered in 2017 had more than tripled the 5 Million in 1980s (Fang et al., 2020). As of December 2018, Africa hosted above a third of the world's IDPs, 16.8 millions, representing 1 235 IDPs per 100 000 inhabitants. According to the Commissioner for Political Affair African Union Commission, H.E Cessouma, this increased in number of forcibly displaced persons resulted from structural factors such as mal governance; unemployment, instability, insecurity, poverty etc (Clémentine André et al., 2019).

Some of the above mentioned factors led Cameroon to register the highest flow of IDPs in its history in 2018. An estimate of four hundred and fifty nine thousand (459 000) were forcibly displaced within the territory because of Boko Haram Insurgency and the state-based conflict opposing the Government and the separatist groups in the North West and South West regions of Cameroon. According to data from the Internal Displacement

Monitoring Centre, Cameroon has registered as of 31st December 2020, one million and three thousand (1 003 000) IDPs, due to conflicts and violence. This gives a proportion of 3778 IDPs per 100 000 inhabitants (*Cameroon | IDMC*, n.d.).

Research reveal that these conflicts negatively impact the individual (survivor) and the ecological system into which he/she is embedded. On the individual level, some survivors might experience emotional, cognitive and behavioural distress. With others developing psychopathologies classified under Trauma Spectrum disorders, such as Posttraumatic Stress Disorder (PTSD) (Bremner & Wittbrodt, 2020; Conrad et al., 2017), with comorbidities like Substance-Related and addictive disorders (Aguilar et al., 2020) depression (Armenta et al., 2019) and anxiety (Henkelmann et al., 2020). As they struggle in their impaired condition, meeting their basic needs becomes problematic, and this in turn intensifies their distress.

The impact on the ecological system is seen on its main sub-systems: family, community and society (IOM, 2021). At the family level, the following are observed: separation of members of the unit, loss of loved ones, loss of social status, destruction of livelihood etc (Hoffman & Kruczek, 2011; IOM, 2021). At the community level, beliefs, values, traditions are shattered, bonds are damaged. Furthermore, in the society, violence and conflict shatter the social fabric, lead to loss of lives, increased insecurity, damaged infrastructures, increased poverty, arm trafficking, smuggling, and violations of human rights (Nwati, 2021; Snoubar & Duman, 2016) .

Although conflicts may lead to the aforementioned consequences, it has been observed that some individuals who experienced those potentially traumatic stressors demonstrate

a degree of resilience that prevents clinically significant impairment. In an attempt to explain the above observation, many scholars developed theories providing insight on the mechanisms of Trauma (Schnyder et al., 2015). Meaning making constitutes one of them. According to this theory, the meaning survivor conveys to the event(s) will determine the level of distress. The greater the discrepancy between the event(s) and the existing core beliefs the more the individual will have challenges integrating it/them into a coherent sense (Holland et al., 2010). Meanwhile, if one is able to integrate the awful events to his/her core beliefs, distress will be prevented (Za, 2015). Salutogenesis and its Sense of Coherence offer a good perspective in understanding meaning making (Schäfer et al., 2019). Our work will therefore exclusively explore meaning making through the salutogenic lens as it relates to PTSD.

In 1979, Aaron Antonovsky developed the theory of Salutogenesis to provide understanding on the origin of health. He named its central construct Sense of Coherence (SOC) and defined it as an orientation one has, that enables him/her to understand and predict his/her environment, and invest available resources to overcome adversity (Antonovsky, 1987). He further argued that individuals who perceived their communities as prepared to respond to crisis, Community Sense of Coherence (SOCC), have an additional resource that helps to deal with stressors (Braun-lewensohn & Sagy, 2011). Studies conducted in several parts of the world have established a negative correlation between SOC and severity of PTSD (Mana & Sagy, 2015).

Up to today, few research, relating those variables, have been done in conflict and post-conflict settings in Africa. Among the existing ones is the study conducted in Democratic Republic of Congo, on survivors of the ongoing war, and the findings were in line with

the others mentioned above (Phuong et al., 2010). To the best of our knowledge, no study unveiling the relationship between SOC, SOCC and PTSD has been done in Cameroon despite the ongoing internal and external conflicts. This study therefore aims at investigating the relationship between the above mentioned variables in Cameroon. We expect that having knowledge on these protective factors will provide an opportunity not only to fill the gap observed so far, but bring up practical suggestions that will inform initiatives taken by state and non state actors to prevent psychological breakdown and rehabilitate survivors.

I. Problem Statement

Conflicts worldwide bring about important economic burden. According to The World Bank, conflicts have led to the loss of 2% - 8.2% of annual Gross Domestic Products (GPD); about 12 Billion USD have been spent on refugees and 8 Billion USD on peace keeping missions (The World Bank, 2018). In Sub-Sarahan Africa the economic cost is reflected by a decrease of about 2% of GDP with projections reaching 20% within five years of conflicts (Fang et al., 2020). Besides that, the mean cost of PTSD ranged from 521 - 19,435 USD per individual per year in addition to the annual indirect cost of 5,021 USD per person (von der Warth et al., 2020).

Knowing that access to mental health services for individual with PTSD is a challenge in Africa and even more in Cameroon with few mental health facilities and unknown statistics on mental health professionals (WHO, 2011, 2018); coupled to the lack of resources to pay for services and insufficient knowledge about the condition; the Cameroonian context hence depicts a dark picture of the disability burden.

Even though many studies in conflict and post conflict zones around the world have demonstrated a negative correlation between the development of PTSD and protective factors like Sense of Coherence, this evidence is still absent in Cameroon.

Therefore, if we are able to identify these factors of resilience and if they are also related to factors such as community support, community preparedness etc., we might identify other targets for interventions despite costly individual trauma therapy.

II. Significance of the study:

Aaron Antonovsky affirms that the Sense of Coherence is a transcultural construct. He further argues that independently of the cultural background and context, an individual with a strong SOC will cope better in adverse situations than one with a low SOC (Antonovsky, 1987). Moreover, Braun-Levensohn and Sagy added that a community with a strong SOC is better prepared and equipped to help its members cope with traumatic stressors (Braun-lewensohn & Sagy, 2011). By examining the above assumptions our study will help to understand factors of resilience in the context of Cameroon; broaden the understanding of SOC in conflict setting, and investigate the significance of SOC in non-western communities in terms of a transcultural perspective. .

III. Justification of the study

The crisis in the North West and South West regions of Cameroon has caused about twenty times more IDPs as compared to Boko Haram attacks (Clémentine André et al., 2019). Research on SOC in other parts of the world have clearly established the salutary nature of the construct in dealing with the effects of life threatening events(Braun-lewensohn & Sagy, 2011; Schäfer et al., 2019; Schnell et al., 2020). Studying Personal and Community SOC in Cameroon will provide an opportunity to identify factors of

resilience specific to affected communities. This will therefore provide other avenues of psychosocial interventions carried out by Governmental and Non-Governmental Humanitarian Organizations in conflict zones, who have been focusing so far on rehabilitation. Thus our findings could help establish solid preventive interventions geared towards reinforcement of the identified personal and community factors of resilience.

IV. Research question

1. What is the relationship between trauma load, PTSD, Personal and Community SOC in internally displaced persons belonging to communities in the NW/SW regions of Cameroon?

V. Overall objective:

- To compare the relationship between Posttraumatic Stress Disorder, Personal and Community Sense of Coherence in Internally Displaced Persons belonging to communities in the North West and South West regions of Cameroon

VI. Specific objectives:

- To measure the level of Personal and Community Sense of Coherence in internally displaced persons from the North West and South West regions of Cameroon.
- To show the influence of Personal and Community Sense of Coherence on the development of Posttraumatic Stress Disorder in internally displaced persons from the North West and South West regions of Cameroon.

Chapter 2 LITERATURE REVIEW

I. Cameroon

Cameroon lies between Central and West Arica, with a population of 26,545,864 on a surface area of 475,442km2 (the world bank, 2021). It is bordered by Nigeria, Chad, Central Africa Republic, Congo Brazzaville and Gabon. The official languages spoken are French and English with more than 240 local languages. Cameroon is divided into ten (10) regions with three main ethnic groups: Bantu, Semi-Bantu and Sudanese (DeLancey, 2021). The executive system is a semi-presidential type where power is shared between the President and the Prime Minister, head of state and head of Government respectively (Enonchong, 2021).

1. Brief History

Cameroon is counted among the few countries in the world holding a bilingual and a bicultural identity. Before it was handed over to France and Britain, Germany led the territory from 1884 to 1916. These new colonial entities partitioned the territory into two with the majority controlled by France. This resulted in the development of different administrative styles, languages, cultural and traditional values (Nfi, 2014). In 1960 the part of Cameroon administered by France got its independence and one year later, because granting independence to British Cameroon (Southern Cameroon) was not an option, the United Nations organised a referendum on February 11th 1961, for people in this part of the country to either join Nigeria or la République du Cameroun (French Cameroon). Seventy percent (70%) of the voters opted for an integration with French Cameroon. Thus in October 1961 Cameroon became a Federal Republic with West and East Cameroon as the two states (Nfi, 2014; Nwati, 2021). The federal systems ran up to

1970 where they decided to reunify on condition that both parties kept their educational, administrative and cultural identities. Unfortunately these terms were not respected as the Anglophones (English speaking Cameroonians) experienced marginalisation. The education system was highly influenced by the Francophone (French speaking Cameroonians) system who had the only examinations board and teachers training institutions; This, among others, led to what became the Anglophone problem. In 2016, this problem escalated from sectorial grievance to arm conflict between the army and the separatists (Policy & Team, 2017). Since then, the North-West and South-West regions of Cameroon have been the theatre of confrontations between both groups, resulting in gross and systematic human rights violations. These violations are perpetrated through mutilations, kidnapping, assassinations, looting, burning of properties, sexual assaults, torture etc. (Policy & Team, 2017).

2. North West Region of Cameroon

The NW region is one of the English speaking (Anglophone) regions of Cameroon. It shares borders with Nigeria. With Bamenda as the capital city, it is divided into seven (07) divisions: Boyo, Bui, Donga Mantung, Menchum, Mezam, Momo and Ngoketunjia. About 2 million people living in that region are spread over a surface area of 17910km2 (Presidency of the Republic of Cameroon, 2021). They are part of the Western highlanders who are characterised by strong attachment to cultural and traditional values with communities led by powerful traditional rulers. Agriculture is their primary economic activity (Mbaku, 2005).

3. South West Region of Cameroon

This anglophone region has Buea as the capital. It is divided into six divisions: Fako, Kupe-Muanenguba, Lebialem, Manyu, Meme, Ndian. with a population of 1,153,125 on a surface area of 25,410km2 (Presidency of the Republic of Cameroon, 2021). They constitute part of the coastal tropical forest people. People from this group have been greatly influenced by Christianity and colonisation. They were exposed to European culture earlier than other groups and this had an impact on their culture (Mbaku, 2005).

II. Personal and Community Sense of Coherence (SOC; SOCC)

Aaron Antonovsky in his book Health, Stress and Coping, published in 1979 explained the theory of Salutogenesis. This was a great shift of paradigm in the field of medicine which so far had focused mainly on the origins and risk factors of diseases, Pathogenesis. Salutogenesis therefore provided insight on the origin of health and its assets (Antonovsky, 1979). The author equated his theory to its central construct, the Sense of Coherence (SOC). He got inspired by a number of Israeli women who in addition to having experienced the traumatic holocaust, also encountered other adverse life events but yet demonstrated resilience (Almedom, 2014). He named those characteristics they possessed Sense of Coherence, and defined it as "A global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feelings of confidence that one's internal and the external environments are predictable and that there is a high probability that things will work out as well as can reasonably be expected" (Antonovsky, 1979, p. 123).

1. Components of Personal Sense of Coherence

There are three components attached to SOC, (1) comprehensibility, (2) manageability, and (3) meaningfulness (Mana et al., 2017; Mana & Sagy, 2015; Reka Fekete et al., 2020). Comprehensibility is considered as the cognitive dimension of SOC. It refers to the predictable nature of stressors, both internal and external. According to Antonovsky, we are in an environment where stressors are expected, they constitute the norms rather than the exceptions. Integrating this provides a way to create a clear pattern out of the chaos experienced (Mittelmark & al, 2017). This structure results from understanding explaining and predicting stressors.

The second element of SOC, manageability, is considered as the instrumental or behavioural aspect of the construct. Antonovsky believed that resources to cope with stressful situations are available and could either be internal and external, formal and informal. Examples of these resources are: genetic predispositions, values and beliefs, cognitive abilities, tangible assets, family, friends and other support groups or systems, services in communities (Almedom, 2014).

The last, and one of the most important aspects of SOC, is meaningfulness. It refers to the will to invest one's resources to overcome the adverse effects of stressors. This element is considered as the motivational dimension of SOC. Antonovsky argued that as one's perception of stressor shifts from burden to challenge, arrangements are made to mobilise available resources to cope with the inordinate demands. This highlights the importance of the last component since motivation drives behaviour. (Mittelmark & al, 2017).

Meaningfulness was added later to the first two elements and brought modifications in the definition of SOC. The more comprehensive definition given by Antonovsky is "A

global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feelings of confidence that stimuli deriving from one internal and external environment in the course of living are structure, predictable and explicable; the resources are available to one to meet the demand posed by these stimuli; and these demands are challenges worthy of investment and engagement." (Antonovsky 1987; Mittelmark & al, 2017).

2. Components of Community Sense of Coherence

Salutogenic scholars accord a great importance to the role culture plays in providing and determining resources an individual uses in coping with adverse situations (Braun-lewensohn & Sagy, 2011). Antonovsky in his definition of General Resistant Resources brought up cultural elements that are part of GRR such as cultural stability, availability of support, knowledge, religion, tradition (Mittelmark & al, 2017). Moreover, several studies as well as Antonovsky writings have identified some characteristics of societies that enhance SOC in their members. Among others are: homogeneous society that preserves its identity while being an element of the modern world; sense of belongingness, structure, rules, order, tradition/religion providing meaning to phenomenon. availability of resources, support etc (Braun-lewensohn & Sagy, 2011; Mana & Sagy, 2015). So far these characteristics have only be studied in their role in building Personal SOC. Therefore studies in the field of Salutogenesis on Personal SOC have been extended to Sense of Community Coherence (SOCC) (Telaku et al., 2021) . Braun Levensohn and Shifra Sagy, define SOCC as the perceived traits of comprehensibility, manageability and meaningfulness a community possesses (Braun-lewensohn & Sagy, 2011). According to them, SOCC is basically the individual's

perception of his/her community regarding the three components of SOC: Comprehensibility, Manageability and Meaningfulness.

Community comprehensibility refers to resources that provide members the understanding that life in their community is predictable structured, safe and secure. Members know and understand the community. Community manageability is described by resources individuals can access in times of challenges. Community meaningfulness resources are these motivational elements from the community that foster satisfaction and interest to invest in challenges for example the feeling of pride to be part of that community (Braun-lewensohn & Sagy, 2011; Mana & Sagy, 2015).

3. Specificity of Sense of Coherence as a protective factor

Research demonstrates that among protective factors like: Fortitude/Strength; Hardiness; Resilience, Self-efficacy; Posttraumatic Growth and Recovery, SOC is the most influential and efficacious in dealing with adverse life events (Almedom, 2014). This can be explained by the combined behavioural, cognitive and motivational aspects of SOC that make it more effective as compared to other salutary factors. Moreover, SOC through the understanding of the characteristics of General Resistant Resources and Specific Resistant Resources provide insight on the dynamic of the resistance it conveys (Schäfer et al., 2019). More than forty years after the development of this theory, research has been consistent in establishing a strong relationship between SOC and stressors. These findings reveal that SOC negatively correlates with psychological distress. A strong SOC leads to better coping with stressors (Mana & Sagy, 2015).

III. Posttraumatic Stress Disorder, Personal and Community Sense of Coherence

Posttraumatic Stress Disorder

Historically, there has been a clear link between the encounter of certain type of events in conflict setting, such as torture, sexual assaults, unlawful arrests, kidnapping, death threats etc. and characteristic psychological and physical disturbances. These events also referred to as traumatic stressors impair one's emotions, feelings, thoughts, perception, behaviours and might as well change core beliefs either positively or negatively, depending on how the experience is processed (Schnyder et al., 2015). Over time, these effects have been given different names: Vent de Boulet" Syndrome, shell shock, "idiotism", Combat Stress Reaction, Traumatic Neurosis, War Neurosis and lastly Posttraumatic Stress Disorder (PTSD) (Crocq & Crocq, 2000).

It is only in 1980 that PTSD became a separate diagnosis in the Diagnostic and Statistical Manual of Mental Disorders, DSM III, capturing comprehensive psychological response to traumatic events. Since then its diagnostic criteria have undergone some changes and the latest version to date, DSM-5, provides four clusters of symptoms with a total of twenty (20) signs and symptoms (APA, 2013). The first criterion of PTSD is the exposure to traumatic event(s). This exposure is experienced in the following ways: direct exposure; witnessing the trauma happening to someone; learning about the event occurring to a loved one and finally exposure to details of the event as a consequence of one's profession. For example first responders, police officers etc. According to DSM-5 learning about the non-violent death of a loved one; medical conditions such as cancer or any other chronic illness, do not qualify anymore as traumatic events. However some catastrophic medical incidents such as sudden wake up during surgery are considered

traumatic stressors. Changes in this criterion also involve the elimination of the subjective emotional response to the traumatic event(s) because of the varying degree of reaction to life threatening situations. Criteria B through E require intrusive, avoidance, negative alteration in mood and cognition and hyperarousal symptoms. These symptoms should be present for a minimum of one month and should impair functioning. Also they should not be better explained by a medical condition or the use of a substance (APA, 2013).

Some scholars explain development of PTSD as a consequence of shattered assumptions about the world and others (Za, 2015). Others like Foa and Kozack argue that PTSD comes as a result of the disruption of the fear structure leading to cognitive dysfunctions (Rauch & Foa, 2006).

According to Kaplan and Sadoc, the lifetime prevalence of PTSD is 10% in women and 4% in men. This prevalence is higher in population of combat veterans, rape victims (Benjamin et al., 2015). Epidemiological research demonstrates that about one third of all trauma-survivors from conflict settings suffer from PTSD (Knipscheer et al., 2020). In a study comparing exposure to traumatic events and the development of PTSD, results revealed that 89,7% of the sample studied were confronted to more than one traumatic event (Kilpatrick et al., 2013).

1. **The relationship between SOC and PTSD**

A review of 50 studies, cross-sectional and longitudinal, compared the relationship between SOC and physical health outcomes, measured according to biological, psychological, health measures including psychological aspects, stress and behavioural aspects. Even though the association between SOC and physical health was Inconsistent,

the authors however found a strong correlation between SOC and psychological aspects of health. Strong SOC inversely correlated with psychological disorders such as depression, PTSD, anxiety (Flensborg-Madsen et al., 2005).

The first meta-analysis study comprising of the analysis of 47 cross-sectional studies from 1996 to 2017, with a total of 10,883 participants revealed a negative correlation between SOC and PTSD in the aftermath of traumatic events (Schäfer et al., 2019).

Another study was conducted in Germany on firefighters. The aim was to investigate some risk and protective factors in the development of PTSD. Among the protective factors investigated was SOC. The study revealed that SOC correlated negatively with the severity of PTSD. Individuals who had experienced adverse events and whose SOC was strong not only had less severe symptoms of PTSD but recovered faster and this in turn strengthened their SOC (Schnell et al., 2020).

In 2007, a cross-sectional study was conducted in the Eastern part of Democratic Republic of Congo on 2.635 adults of average age of 37 who have experienced and/or witness at least one traumatic event. The results indicated that SOC was inversely related to cumulative exposure to trauma events, PTSD and Depression (Phuong et al., 2010).

2. Relationship between PTSD and Community Sense of Coherence

Very few studies investigating the salutary nature of this construct have been conducted, and to the best of our knowledge no study uncovering the relationship between SOCC and PTSD. However, the few available studies on SOCC reveal that: Societies that provide meaning, consistency, closeness have a stronger SOCC; Low-socioeconomic groups show weak SOCC; religious societies have strong SOCC; inconsistent relationship between SOCC and stress; and inconsistent findings in the level of SOCC

between majority and minority groups (Braun-lewensohn & Sagy, 2011; Mana & Sagy, 2015; Telaku et al., 2021)

In 2010, Levensohn and Sagy conducted a study on 1,609 Israeli adolescents from three communities, Jewish, Muslims and Druze. The participants were aged 12-18 years old. They were investigating the relationship between Personal SOC, SOCC and stress reactions subsequent to a stressful bush fire. Results revealed that SOCC was stronger in the minority of the minority group (Druze) and also that it reinforced protection against stressors (Braun-lewensohn & Sagy, 2011).

III. Personal Sense of Coherence and Community Sense of Coherence: A salutary factor in the Cameroonian context.

As mentioned earlier, state conflicts in Cameroon have resulted in an unprecedented amount of forced displacement with consequences for individuals and their ecosystems. Knowing that SOC is established as a buffer against the adverse effects of these conflicts and that SOCC adds supplementary psychological protection, we expect to see a negative correlation with PTSD. Moreover, studying SOCC in IDPs uprooted from their communities might provide avenues for future research to pinpoint culture specific characteristics influencing its development, and also investigate the impact of displacement (living in a different community) on the pattern of SOCC.

IV. Theoretical framework

Our study is informed by Salutogenesis. It is a theory that explains factors contributing to the promotion and maintenance of physical and mental well-being rather than disease with particular emphasis on the coping mechanisms of individuals that help preserve health despite stressful conditions(Braun-lewensohn & Sagy, 2011) . The theory is conceptualised around the following rationales (Reka Fekete et al., 2020):

- Health exists in an "ease" and "dis-ease" continuum. Individuals find themselves moving from one point of the continuum to the other. Good health is attached to the ease end and breakdown to the dis-ease end.
- Attention is accorded to factors that explain and enhance health.
- Health is promoted by tension and strain provided they do not transform into stress and eventually breakdown.
- Treatment involves voluntary investment of internal and external resources (Reka Fekete et al., 2020).

Aaron Antonovsky in his Salutogenic Model of Health described General Resistant Resources (GRR) as the main factors that help individuals cope with inordinate demands. He defined them as: "Any Physiological, biochemical, cognitive, artifactual material, emotional, valuative attitudinal, interpersonal relational, macrosociocultural, characteristic of an individual, primary group, subculture and society, that is effective in avoiding and or combating a wide variety of stressors thus preventing tension to be transformed into stress." (Mittelmark & al, 2017) .

He further argued that these resources shape the Sense of Coherence and are in return strengthened by SOC. Therefore, according to this theory, an individual with a strong SOC will easily cope with adversity than one with a weak SOC.

The three components of SOC: comprehensibility, manageability and meaningfulness offer the cognitive, behavioural and motivational dispositions one needs to comprehend (meaning-made) and invest available internal and external resources to overcome adversity.

In our study we want to investigate protective factors that might influence the development of PTSD in a population exposed to multiple traumatic events. As described above, salutogenesis focuses on origin of health and asserts, and has conceptualized constructs that can help in understanding the development or not of impairment after exposure to all form of stressors. These constructs are the ones studied in this research.

We therefore expect to find a negative correlation between SOC and PTSD as well as SOCC and PTSD.

V. Conceptual Framework

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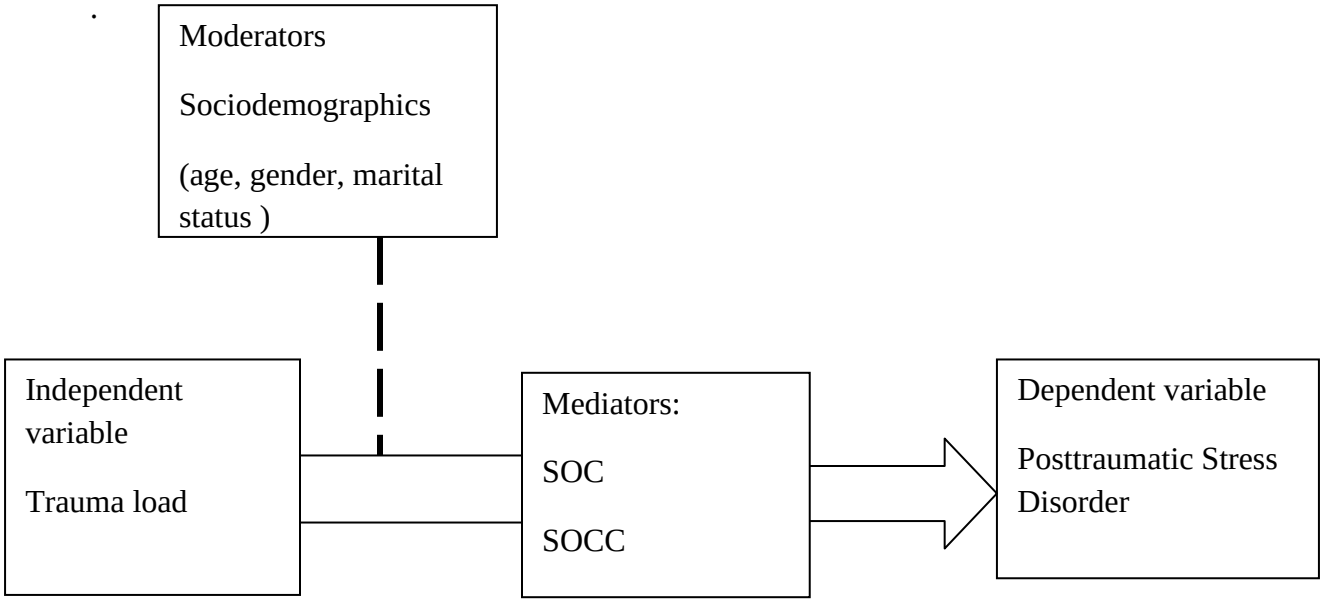


In our conceptual framework, the independent variable is the trauma load measured by the Trauma Event Checklist. These traumatic events are not only limited to those experienced during the crisis, but are extended to identify even natural disasters participants might have encountered. Posttraumatic Stress Disorder is our dependent variable, the outcome after experiencing traumatic event (s). Since the development of PTSD is different in populations as we consider gender, age, socio economic status etc.

These sociodemographics will moderate the relationship between our independent and dependent variables. Finally, Personal and Community Sense of Coherence serves as mediators between trauma load and PTSD as research has established that SOC negatively correlates with PTSD. Therefore a strong SOC will lead to absence or less severe symptoms of PTSD and a weak SOC to the development of severe PTSD.

Chapter 3 METHODOLOGY

I. Study method and design

This research is a cross-sectional study, that will enable data collection within a short period of time. A suitable option considering the limited time and resources I have for the study. Moreover, the research is conducted on displaced individuals who are in constant movement with possibility of returning to their communities. Therefore collecting data at a specific point of time will prevent losing track of research participants.

II. Study Site

The research will be conducted in Yaoundé, the capital of Cameroon. This city is located in the Central Region and is the second largest city of the country, with a population of about 2 769 568 as of the last census in 2015 (BUCREP, n.d.). According to the March 2021 report of the United \nations Office for Coordination of Humanitarian Affairs (OCHA), the Centre region hosts about 11, 350 IDPs, figure requiring review because the number might be more (OCHA, 2021).

The identified data collection sites were Trauma Centre Cameroon (TCC), Presbyterian Church in Cameroon and Cameroon Baptist Convention. However, it was noticed onsite that IDPs who visited the abovementioned churches were equally registered in other local NGO's like Trauma Centre Cameroon. To avoid duplication and confusion, data collection sites were limited to TCC and Hope and Rehabilitation Organisation was added. These are two organisations of the civil society.

Trauma Centre Cameroon is a not-for-profit organisation operating since 1997 with the mission of rehabilitating and restoring dignity and hope of victims of violence and torture. This mission is achieved through a multidisciplinary intervention composed of staff with the following background: psychological, social, medical, and legal. The

Centre also has a department of conflict prevention and peace building. For the past twenty four years, TCC has been providing psychosocial support to refugees, IDPs, female and minor inmates, local communities hosting displaced populations etc. The organisation has a total of 143 members composed of full and part - time staffs, volunteers and board members.

Just like TCC, HaRO is a nongovernmental, not-for-profit organisation working to alleviate suffering and reduce vulnerabilities since 2016. Its activities cover the Centre, Littoral, North West and South West regions. The 12 volunteers constituting the staff offer psychosocial support, education and training programs to their beneficiaries who are mostly IDPs from the North West and South West Regions. .

III. Study Population

The study targeted IDPs aged 18 and above who have settled in the town of Yaoundé and have been registered in any of the abovementioned organisations.

IV. Sample Size

The sample size of our population will be computed using Cochran formula (Israel, 2003).

$$n_o = \frac{Z^2 pq}{e^2}$$

n_o = Sample size

Z = the critical value of the desired confidence level. For a confidence level of 95% the value of Z is 1.96

e = Margin of error, +/-7%

p = Estimated proportion of an attribute that is present in the population, 0.5

q = 1-p, 0.5

$n_o = \frac{(1.96x1.96)\ (0.5)\ (0.5)}{(0.07 \times 0.07)}$

$n_o = 196$

We will consider 196 as the lower boundary.

Calculation of proportion per study site

IDPs registered in TCC- 105; HaRO - 397

Coefficient of proportionality: Sample size/ Total Population

= 196/(105+397)

Coefficient of Proportionality=0.39

Sample size in TCC = 0.39 x 105

= 41

Sample size in PCC = 0.39 x 397

= 155

V. Sampling procedure:

Our computed sample size was 196. With the modified data collection sites, a new coefficient of proportionality was calculated based on the number of IDPs present in the two organisations who met the inclusion criteria. They were 105 and 397 in TCC and HaRO respectively. Our calculated coefficient of proportionality was 0.39. Therefore a sample of 41 participants was taken from TCC and 155 from HaRO. The lists of IDPs per organisation was attributed numbers then a fixed starting point was identified, which is

the first name at the bottom of the list. The constant interval "nth" was equated to 4. Therefore every 4th person on the list was sampled for the study. This process was repeated until sample size obtained. They were then recruited through phone calls. Thirty-one (31) out of forty-one (41) in TCC and 143 out of 155 in HaRO reported for data collection. However two participants discontinued their participation.

VI. Inclusion criteria

Participants recruited for the study are IDPs registered in any of the abovementioned organisations. These IDPs were displaced as a result of the crisis in the North West or South West Regions only, and they all originated from those regions. Moreover, they were aged 18 and above the day of the interview.

VII. Exclusion Criteria

Internally Displaced Persons meeting the inclusion criteria who declined to give consent were excluded. Were also excluded IDPs who do not belong to ethnic groups in the North West and South West regions and those presenting health challenges the day of the interview. Participants with acute psychosis and acute intoxication were also excluded.

VIII. Recruitment

Once approval from KNH-UON Ethics Board, University of Douala Board of Ethics, the Executive Director of TCC and the Chair Persons of PCC and CBC in Yaoundé is obtained, we will proceed by contacting the sampled participants through phone calls. The study will be explained to them in understandable terms and they will be invited to participate. Those unwilling to be part will be thanked and reassured that their decision has no consequences on the support they received from the organizations. For those willing to participate, an invitation to one of the premises will be given on a day

convenient to them. Upon arrival they will be welcomed and directed to a safe place conducive for data collection. Once there, they will be briefed again on the aim of the study. This will be followed by the distribution of consent forms and explanation of its content. After signing the form, the participants will be given the questionnaire and filling will be supervised by the researcher.

IX. Ethical Consideration

The research project was presented to the Department of Psychiatry of the University of Nairobi for approval prior to submission to the KNH/UON Ethic Board for ethical clearance. The proposal was cleared by KNH/UON Ethic Board and the University Of Douala Board Of Ethics, Cameroon. Furthermore, authorisation was obtained from the Executive Director of Trauma Centre Cameroon and the Coordinator of HaRO.

The participants were interviewed within the premises of Trauma Centre Cameroon, Presbyterian Church in Cameroon and where safety and confidentiality were guarantee. Upon arrival, they were directed to the interview room and were instructed on voluntary participation in the study as clearly mentioned in the consent form. Their right to withdraw at any moment in the process without consequences was clearly explained.

Since this study targets a vulnerable group and that part of the questionnaire consists of potentially stressful questions, there is a risk of triggering distress. Therefore signs of distress was monitored by the researcher and stress inoculation techniques were used to help the participants manage difficult emotions. Participants who needed further support were referred to the Psychological team of Trauma Centre Cameroon. Finally an amount of 1500 frs CFA (2.58USD) was given to participants to cover the cost of transport from their neighbourhood to the study sites and back.

X. Data Collection Tools

The tools constituting our questionnaire have been tested for both validity and reliability; therefore these psychometric properties were not further tested in our study. PCL-5 is based on DSM-5 criteria for the diagnostic of PTSD with internal consistency of 0.94 according to some studies (Blevins et al., 2015). On the other hand, SOC-13 has been tested in several settings including Africa. Its Cronbach's alpha ranges from 0.70 to 0.92 (Eriksson & Mittelmark, 2017). Regarding Community Sense of Coherence Questionnaire, some studies indicate Cronbach's alpha scores within 0.82 to 0.85 (Mana & Sagy, 2015).

Socio-Demographic Questionnaire

This questionnaire included the following information: Age, gender, marital status, number of children, ethnicity, place of residence and the socio-economic status. The item of ethnic group in this section is relevant to understand the variability of community sense of coherence in the regions of study. Other variables such as age, gender, education level, socio-economic status, moderate the relationship between our principal variables.

Trauma Event List:

Life Events Checklist (LEC-5) was used (Weathers et al., 2018) in addition to the list of traumatic events specific to the Anglophone Crisis the researcher established.

Posttraumatic Disorder Check List-5

This PTSD screening tool was developed by Price & al. It is a 20 item instrument based on DSM-5 criteria for PTSD. The minimum number of points per item is 0 not at all and the maximum 4-extremely. The score ranges from 0 to 80. A cut-off score of 31-33 is

indicative of PTSD and any item rated 2 is considered moderate in terms of severity. This tool is a self-report measure that can be administered within 10-15 minutes (Zuromski et al., 2019).

Orientation to Life Questionnaire, SOC-13.

This tool was developed by Aaron Antonovsky to measure the Sense of Coherence. The shorter version developed in 1987 by the same author (Eriksson & Mittelmark, 2017) was used in this study. It is a 13 items scale that measures the three aspects of SOC, Comprehensibility, Manageability and Meaningfulness. Each item is rated on a scale of 1 to 7 which both represents the two extremes. The total score rages from 13 to 90. This version greatly correlates with the long version SOC-29. These tools have been tested in different countries and on different continents and results yielded have been consistent (Mittelmark & al, 2017).

Sense of Community Coherence Questionnaire

This is a self-administered 7 items instrument. The scale ranges from 1 to 7. It is design to cover the three aspect of SOC. The first 2 questions assess community comprehensibility; questions 3-5 community manageability and the last 2 community meaningfulness (Telaku et al., 2021). Low scores indicates a low SOCC and high scores a strong SOCC.

XI. Data collection procedure

During fourteen days, data was collected within the premises of TCC and HaRO.. This was done from 8:00am to 4:00pm. The participants were organised in small groups of 5 to 10 members. Upon arrival, the study was once again explained to them and consent sought. The participants were given the questionnaire composed of Sociodemographics,

Trauma Event Checklist, Posttraumatic Stress Disorder Checklist, Orientation to Life Questionnaire and Community Sense of Coherence Questionnaire. Filling was monitored by the researcher and it took an average of 40mins for completion. No participant showed overt signs of distress during administration. However, those with severe PTSD symptoms were offered the opportunity to talk to a psychologist in Trauma Centre Cameroon.

The collected data was coded and double entered in a Microsoft Access database. A total of 173 questionnaires were properly filled but one had uncompleted sections rendering it non exploitable for the research. Of the 172 participants, 133 were female and 39 male, aged 18 to 66 years.

XII. Quality assurance

The researcher's experience in providing psychosocial support to war victims and the training received in the course of this Master programme, coupled to the guidance of qualified supervisors from the University of Nairobi, Medical School Hamburg and Université des Montagnes, provided guarantee of care and control during the study.

XIII. Data Management

The duly filled questionnaires and consent forms were kept safe in a cabinet accessible only to the researcher. The data was coded and double entered in a Microsoft Access database and imported in Stata version 16.

XIV. Data Analysis

Data was analysed using Stata version 16. Participant characteristics, trauma events load, PTSD, personal and community sense of coherence variables were presented in a tabular form stratified by gender and regions. Bivariate and multivariate logistic regression was used to determine the influence of the independent variables on PTSD. Associations was

reported by use of odds ratios with their 95% CI. Statistical significance was taken at p <0.05

XV. Data Dissemination

Copies of our study will be given to the Department of Psychiatry in the University of Nairobi; The Department of Psychology in the University of Yaoundé, Cameroon; Trauma Centre Cameroon; Bread For The World, Germany and published in a peer reviewed journal.

Chapter 4 RESULTS

Of the 196 participants invited for the study, 175 presented themselves to the different studies sites. 2 participants present failed to give concern and 1 form was poorly filled. Therefore data was collected from a sample of 172 participants, giving a participation rate of 88%.

I. Sociodemographics

Sociodemographic information were collected on the participants' gender, age, marital status, number of children, education level and family economic status.

1. Gender

Of the 172 participants, 133 were female and 39 male with a percentage of 77% and 23% respectively. There was no statistical significance between the gender difference in the study.

2. Age

Participants age was grouped into 3 categories, 18 - 29; 30 - 44; and 45+. Most of the participants fell within the second category, 30 - 44 (46 %). The mean age of participants was 34 years.

Figure 1. ***Female by age group***

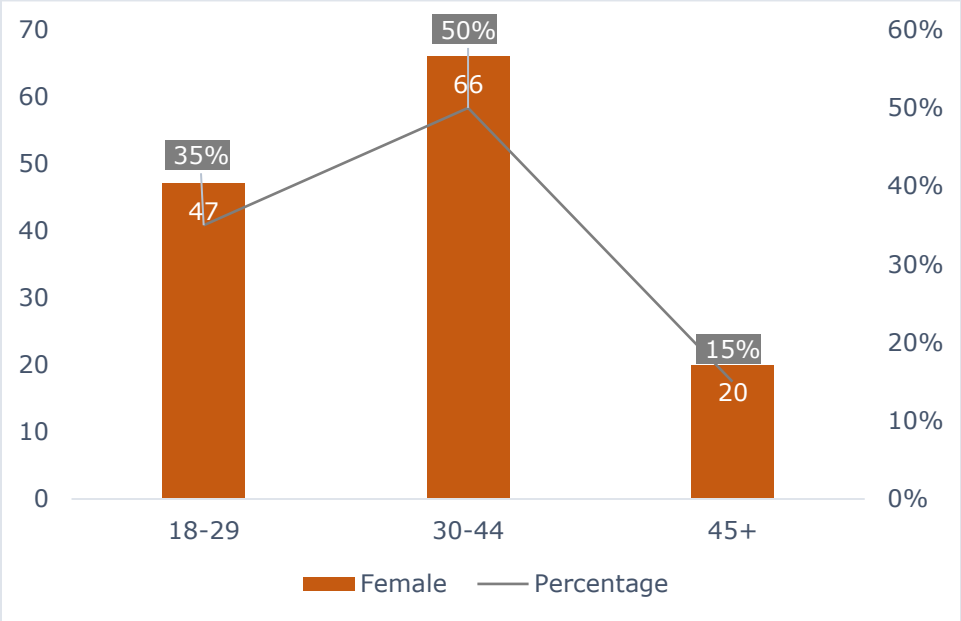
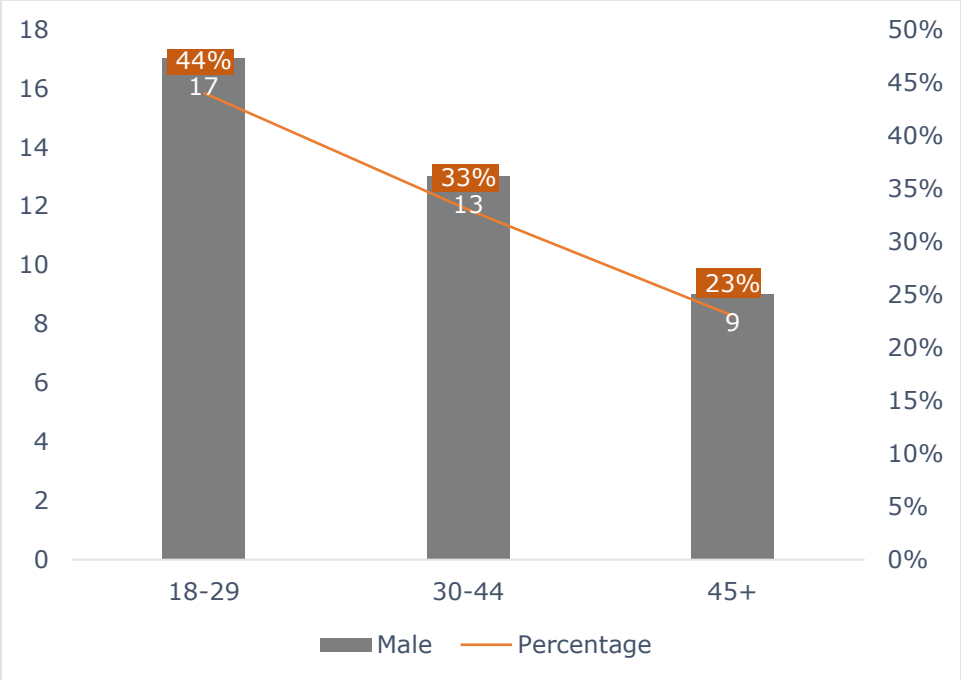


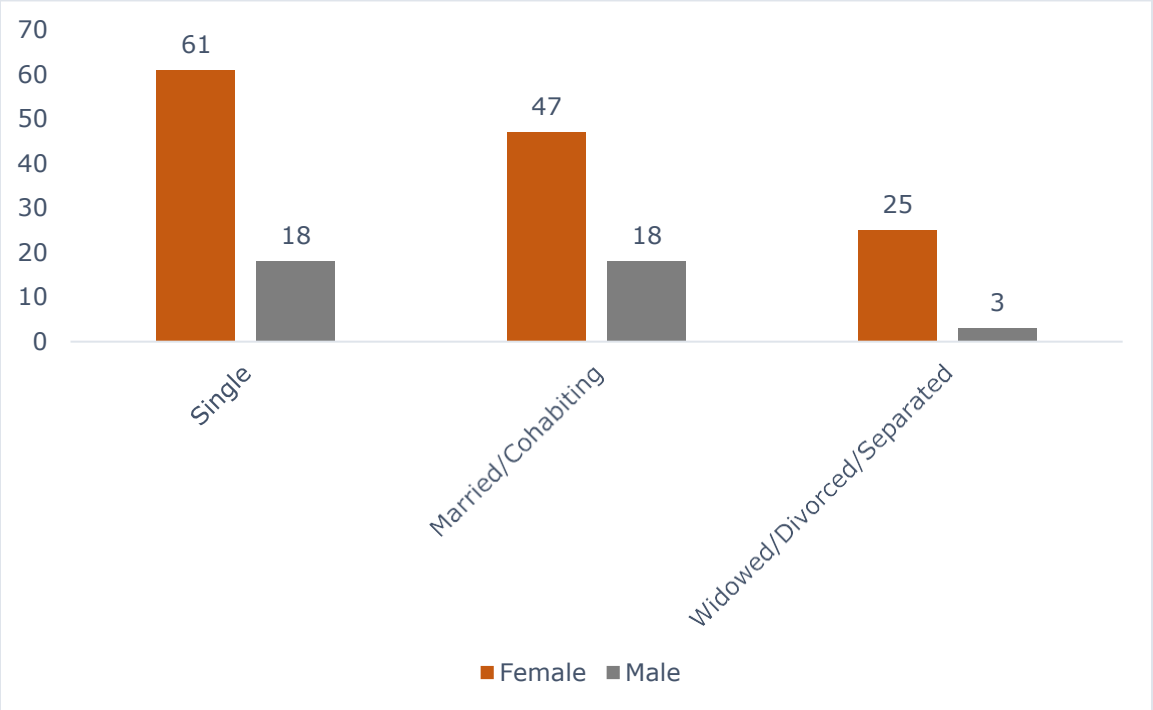
Figure 2. ***Male by age group***



3. Marital Status

The majority of the participants were single, 46%. Followed by 38% married/cohabiting and 16% were either widowed, divorced or separated.

Figure 3. ***Marital status by gender***



4. **Number of children**

Of all the participants, 30% had 5 or more children (52). Those with 3-4 children were 26% (44). Participants with 1-2 children were 42 (24%) and 32 had no children (20 %).

5. **Level of education**

Most of the participants attended secondary school, 53%, followed by 27% who had a tertiary level and 20% primary school level. One participant had no education experience.

6. **Family economic status**

Majority of participants perceived their family as being either less than average or much less than average, 46% and 43 % respectively, followed by average, 11%. None of the respondents considered the economic status of their family as more than average or much more than average.

Table 1

Demographic characteristics

		Sex			
Variable	N	Overall, N = 172[1]	Female, N = 133[1]	Male, N = 39[1]	p-value[2]
Age category (Years)	172				0.2
18-29		64 (37%)	47 (35%)	17 (44%)	
30-44		79 (46%)	66 (50%)	13 (33%)	
45+		29 (17%)	20 (15%)	9 (23%)	
Age in Years	172	34 (27, 42)	34 (27, 41)	32 (24, 43)	0.8
Marital Status	172				0.2
Single		79 (46%)	61 (46%)	18 (46%)	
Married/Cohabiting		65 (38%)	47 (35%)	18 (46%)	
Widowed/Divorced/Separated		28 (16%)	25 (19%)	3 (7.7%)	
Number of Children	172				**0.008**
None		34 (20%)	19 (14%)	15 (38%)	
1-2 children		42 (24%)	35 (26%)	7 (18%)	
3-4 children		44 (26%)	38 (29%)	6 (15%)	
5 + children		52 (30%)	41 (31%)	11 (28%)	
Number of Children	172	3.00 (1.00, 5.00)	3.00 (1.00, 5.00)	2.00 (0.00, 5.00)	0.11
Level of Education	171				0.13
Primary		35 (20%)	31 (23%)	4 (10%)	
Secondary		90 (53%)	69 (52%)	21 (54%)	
Tertiary		46 (27%)	32 (24%)	14 (36%)	

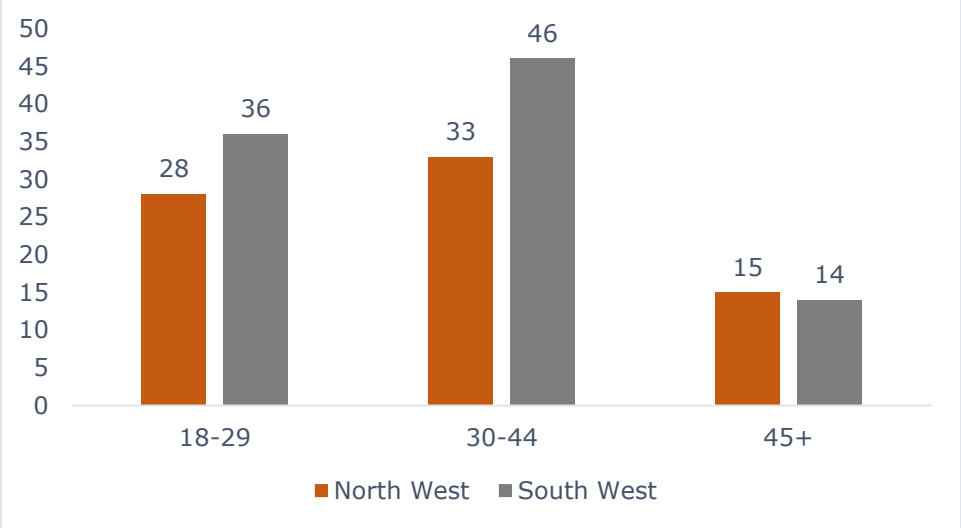
		Sex			
Variable	N	Overall, N = 172[1]	Female, N = 133[1]	Male, N = 39[1]	p-value[2]
Unknown		1	1	0	
Family Economic Status	172				0.4
Much less than average		74 (43%)	61 (46%)	13 (33%)	
Less than average		79 (46%)	58 (44%)	21 (54%)	
Average		19 (11%)	14 (11%)	5 (13%)	
More than average		0 (0%)	0 (0%)	0 (0%)	
Much more than average		0 (0%)	0 (0%)	0 (0%)	

[1]n (%); Median (IQR)

[2]Pearson's Chi-squared test; Wilcoxon rank sum test; Fisher's exact test

II. Demographics per region

Figure 4. ***Age per region***



1. **North West Region**

Of the 172 participants, 76 originated from the North West Region. 55 were female and 21 male. 28 of them were aged 18 -29, 33 had 30 -44 years and 15 was 45 years and above. Among these participants, 31 were single, 32 were either married or cohabited and 13 were either widowed, divorced or Separated. 15 participants had no children, 20 had 1-2 children, 18 had 3-4 children and 23 had 5 and more children. Regarding education level, 15 participants had a primary level, 36 secondary level, 24 Tertiary and 1 did not attend school. Concerning the family economic status, 35 identified their economic status as much less than average, 32 as less than average, 9 as average and non had an economic status above average or much more than average.

Figure 5. ***Gender North West***

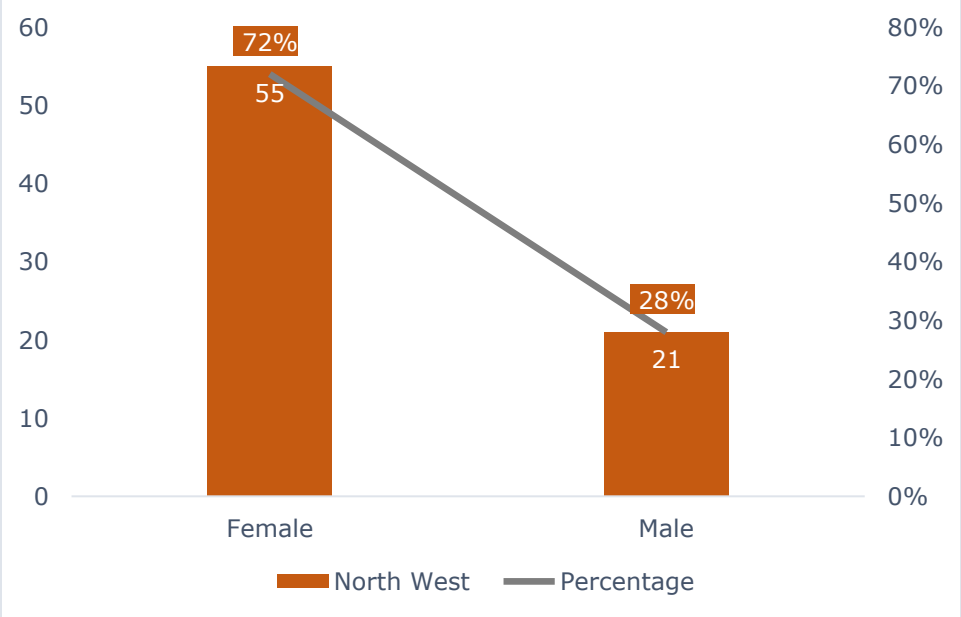
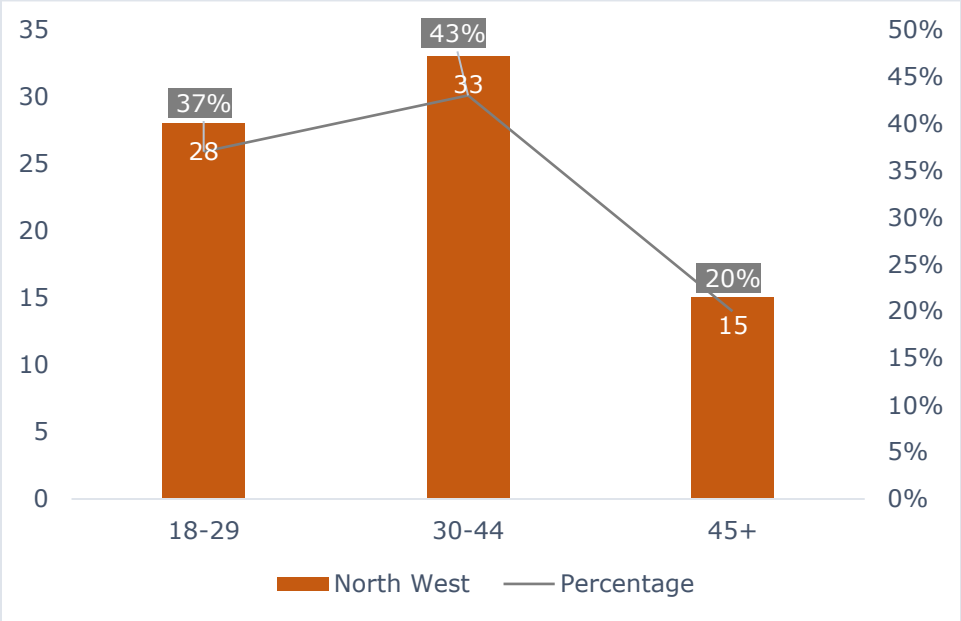


Figure 6. ***Age North West***



2. South West Region

A total of 96 participants originated from the South West Region. Of the 96, 78 were female and 18 male. 36 of them were aged 18 -29, 46 had 30 -44 years and 14 was 45 years and above. Among these participants, 48 were single, 33 were either married or cohabited and 15 were either widowed, divorced or Separated. 19 participants had no children, 22 had 1-2 children, 26 had 3-4 children and 29 had 5 had more children. Regarding education level, 20 participants had a primary level, 54 secondary level, 22 Tertiary. Regarding the family economic status, 39 identified their economic status as much less than average, 47 as less than average, 10 as average and non had an economic status above average or much more than average.

Figure 7. ***Gender South West***

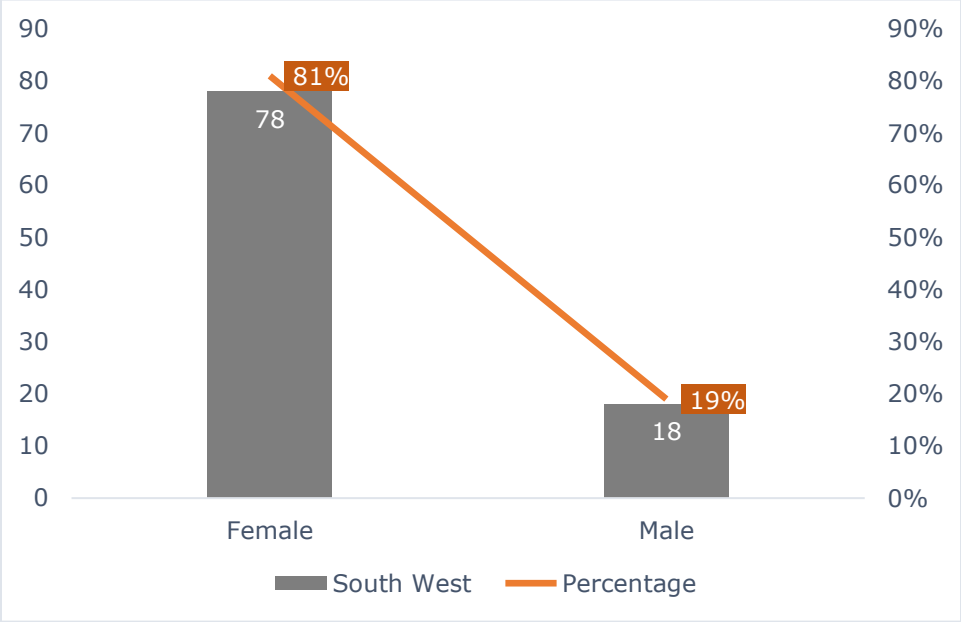


Figure 8. ***Age South West***

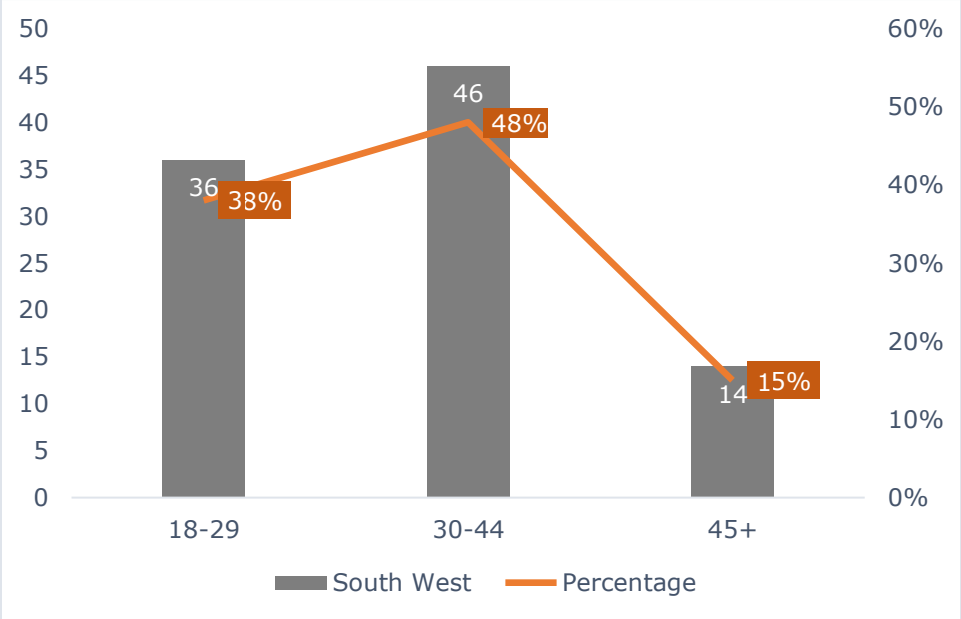


Table 2

Demographic characteristics by regions

		Region			
Variable	N	Overall, N = 172[1]	North West, N = 76[1]	South West, N = 96[1]	p-value[2]
Sex	172				0.2
Female		133 (77%)	55 (72%)	78 (81%)	
Male		39 (23%)	21 (28%)	18 (19%)	
Age category (Years)	172				0.7
18-29		64 (37%)	28 (37%)	36 (38%)	
30-44		79 (46%)	33 (43%)	46 (48%)	
45+		29 (17%)	15 (20%)	14 (15%)	
Age in Years	172	34 (27, 42)	34 (27, 42)	34 (26, 41)	>0.9
Marital Status	172				0.5
Single		79 (46%)	31 (41%)	48 (50%)	
Married/Cohabiting		65 (38%)	32 (42%)	33 (34%)	
Widowed/Divorced/Separated		28 (16%)	13 (17%)	15 (16%)	
Number of Children	172				>0.9
None		34 (20%)	15 (20%)	19 (20%)	
1-2 children		42 (24%)	20 (26%)	22 (23%)	
3-4 children		44 (26%)	18 (24%)	26 (27%)	
5 + children		52 (30%)	23 (30%)	29 (30%)	

			Region		
Variable	N	Overall, N = 172[1]	North West, N = 76[1]	South West, N = 96[1]	p-value[2]
Number of Children	172	3.00 (1.00, 5.00)	3.00 (1.00, 5.00)	3.00 (1.00, 5.00)	>0.9
Level of Education	171				0.4
Primary		35 (20%)	15 (20%)	20 (21%)	
Secondary		90 (53%)	36 (48%)	54 (56%)	
Tertiary		46 (27%)	24 (32%)	22 (23%)	
Unknown		1	1	0	
Family Economic Status	172				0.7
Much less than average		74 (43%)	35 (46%)	39 (41%)	
Less than average		79 (46%)	32 (42%)	47 (49%)	
Average		19 (11%)	9 (12%)	10 (10%)	
More than average		0 (0%)	0 (0%)	0 (0%)	
Much more than average		0 (0%)	0 (0%)	0 (0%)	

[1]n (%); Median (IQR)

[2]Pearson's Chi-squared test; Wilcoxon rank sum test; Fisher's exact test

III. Posttraumatic Stress Disorder

Of the 172 respondents, 162 were screened positive for PTSD (94%) and 10 had no PTSD (6%). The percentage of female with PTSD was higher than that of male, 78% and 22% respectively. Participants originating from the South West had a higher rate of PTSD (58%) than those from the North West region (42%). Respondents aged 30-44 had a higher rate of PTSD 46% , followed by 18-29 (37%) and lastly those aged 45 and

above, 27%. The median age of PTSD was 34. Regarding marital status, participants who were single had the highest rate of PTSD 46%, followed by those who were married or cohabited (37%) and last the widowed, divorced or separated (17%). Participants with 5 and more children had the highest percentage of PTSD (31%), followed by those with 3-4 children (25%), 1-2 children (24%) and lastly 20% for those without children. Most of the participants with a secondary academic level were screened positive for PTSD (52%), followed by tertiary level 28% and primary level 20%. Those whose family economic status was less than average had the highest rate of PTSD (45%), followed those with much less than average, 44%, and those with average 11%.

Figure 9. ***PTSD per Gender***

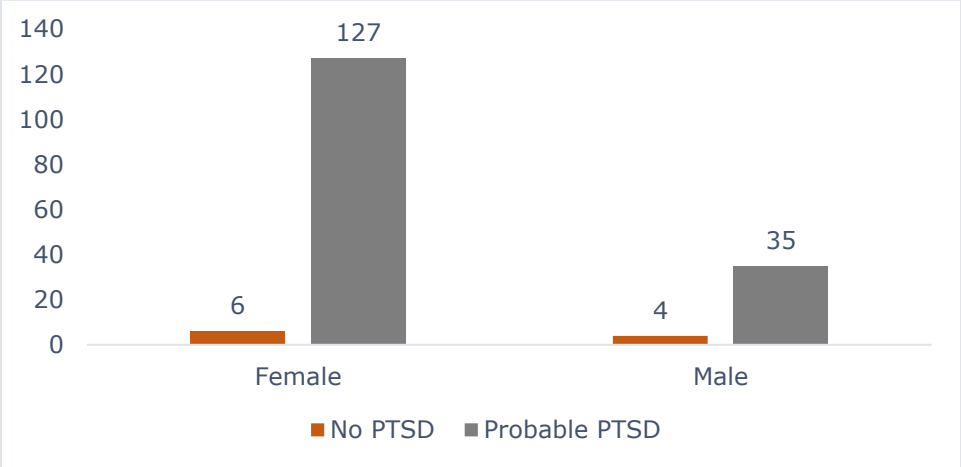


Figure 10. ***PTSD per age***

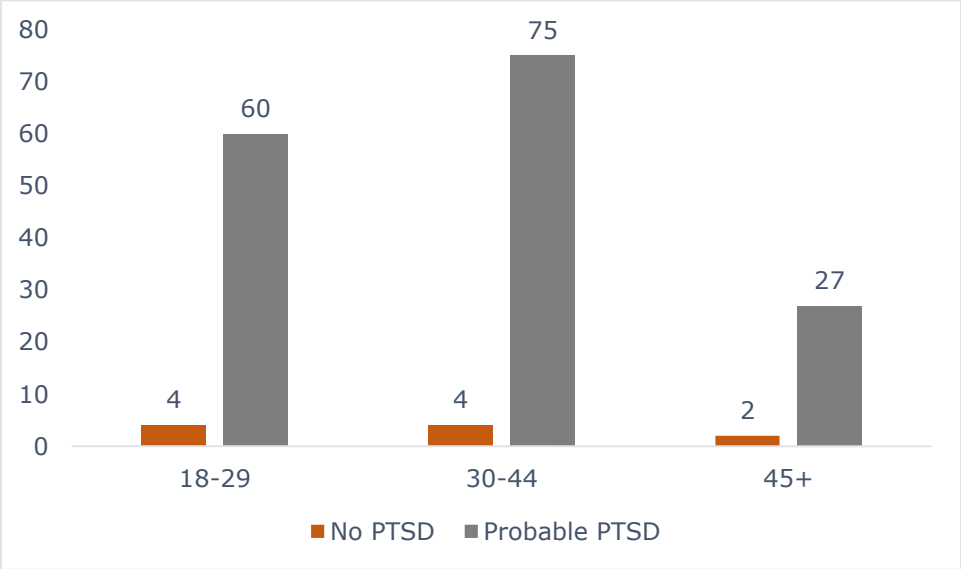


Figure 11. ***PTSD per Marital status***

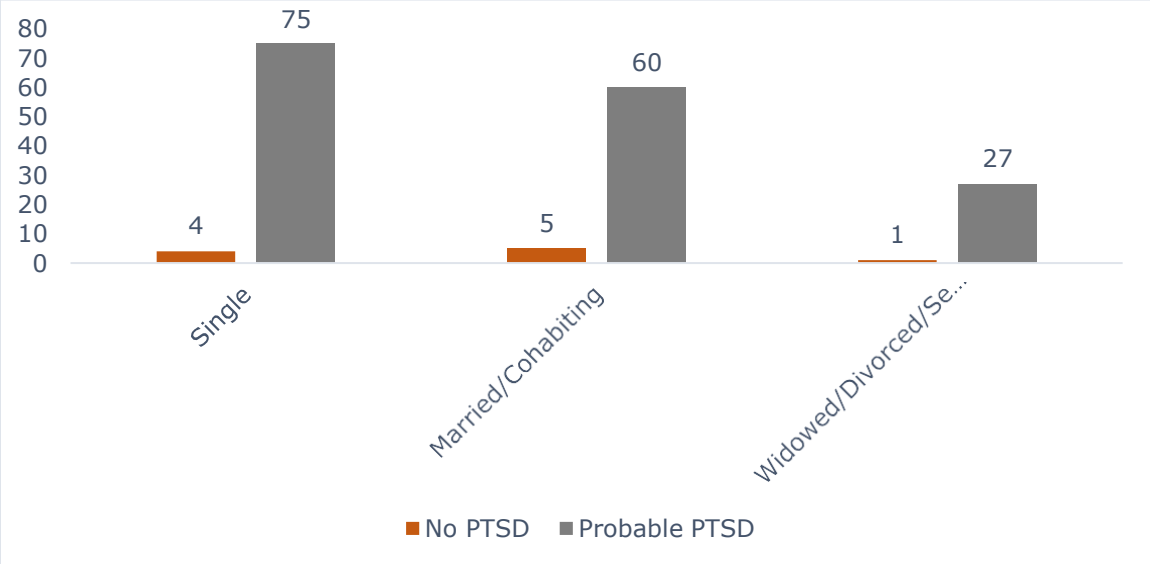


Figure 12. ***PTSD per region***

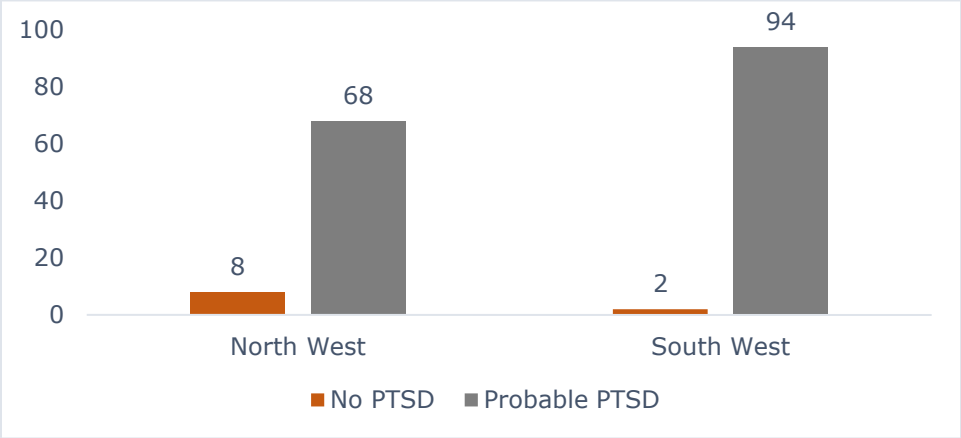


Table 3

Demographic characteristics by PTSD

			PTSD		
Variable	N	Overall, N = 172[1]	No PTSD, N = 10[1]	Probable PTSD, N = 162[1]	p-value[2]
Sex	172				0.2
Female		133 (77%)	6 (60%)	127 (78%)	
Male		39 (23%)	4 (40%)	35 (22%)	
Region	172				**0.023**
North West		76 (44%)	8 (80%)	68 (42%)	
South West		96 (56%)	2 (20%)	94 (58%)	
Age category (Years)	172				>0.9
18-29		64 (37%)	4 (40%)	60 (37%)	
30-44		79 (46%)	4 (40%)	75 (46%)	
45+		29 (17%)	2 (20%)	27 (17%)	

			PTSD		
Variable	N	Overall, N = 172[1]	No PTSD, N = 10[1]	Probable PTSD, N = 162[1]	p-value[2]
Age in Years	172	34 (27, 42)	38 (22, 44)	34 (27, 41)	>0.9
Marital Status	172				0.8
Single		79 (46%)	4 (40%)	75 (46%)	
Married/Cohabiting		65 (38%)	5 (50%)	60 (37%)	
Widowed/Divorced/Separated		28 (16%)	1 (10%)	27 (17%)	
Number of Children	172				0.9
None		34 (20%)	2 (20%)	32 (20%)	
1-2 children		42 (24%)	3 (30%)	39 (24%)	
3-4 children		44 (26%)	3 (30%)	41 (25%)	
5 + children		52 (30%)	2 (20%)	50 (31%)	
Number of Children	172	3.00 (1.00, 5.00)	2.50 (1.25, 4.00)	3.00 (1.00,	>0.9
Level of Education	171				0.5
Primary		35 (20%)	2 (20%)	33 (20%)	
Secondary		90 (53%)	7 (70%)	83 (52%)	
Tertiary		46 (27%)	1 (10%)	45 (28%)	
Family Economic Status	172				0.7
Much less than average		74 (43%)	3 (30%)	71 (44%)	
Less than average		79 (46%)	6 (60%)	73 (45%)	
Average		19 (11%)	1 (10%)	18 (11%)	
More than average		0 (0%)	0 (0%)	0 (0%)	
Much more than average		0 (0%)	0 (0%)	0 (0%)	

			PTSD		
Variable	N	Overall, N = 172[1]	No PTSD, N = 10[1]	Probable PTSD, N = 162[1]	p-value[2]

[1]n (%); Median (IQR)

[2]Fisher's exact test; Wilcoxon rank sum test

IV. Personal Sense of Coherence

Of the 172 respondents, a total of 106 had a weak SOC (62%) and 66 had a strong SOC (38%). Female respondents had the highest rate of weak SOC 64% (85) as compared to male 54% (21). Of all the participants with a weak SOC, 56 originated from the South West and 50 from the North West. Out of the participants with PTSD 62% (100) had a weak SOC, and 38% had strong SOC. Whereas 60% of participants with a weak SOC had no PTSD as well 40% with a strong SOC.

Figure 13. ***Personal SOC per Region***

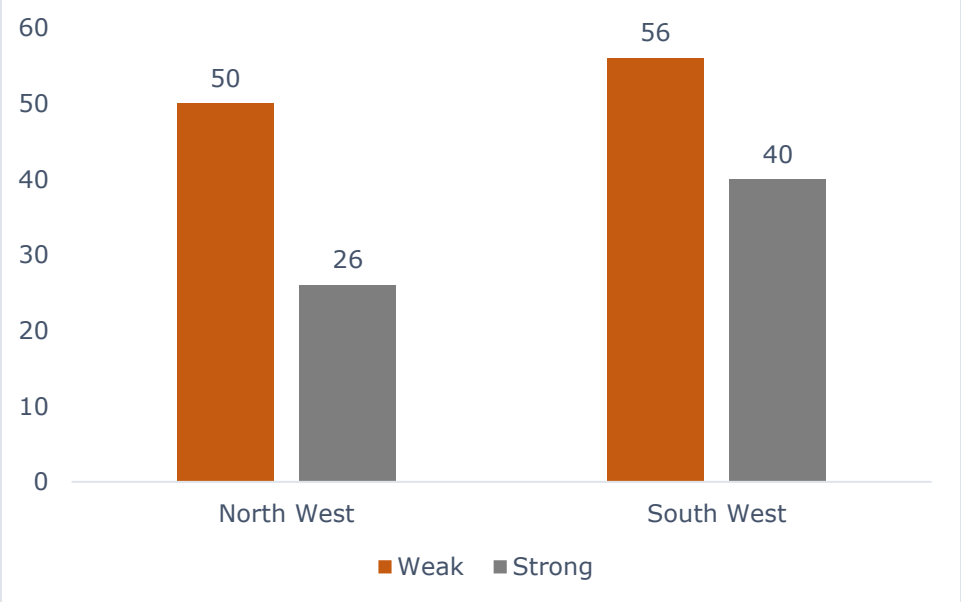


Figure 14. ***Personal SOC per Gender***

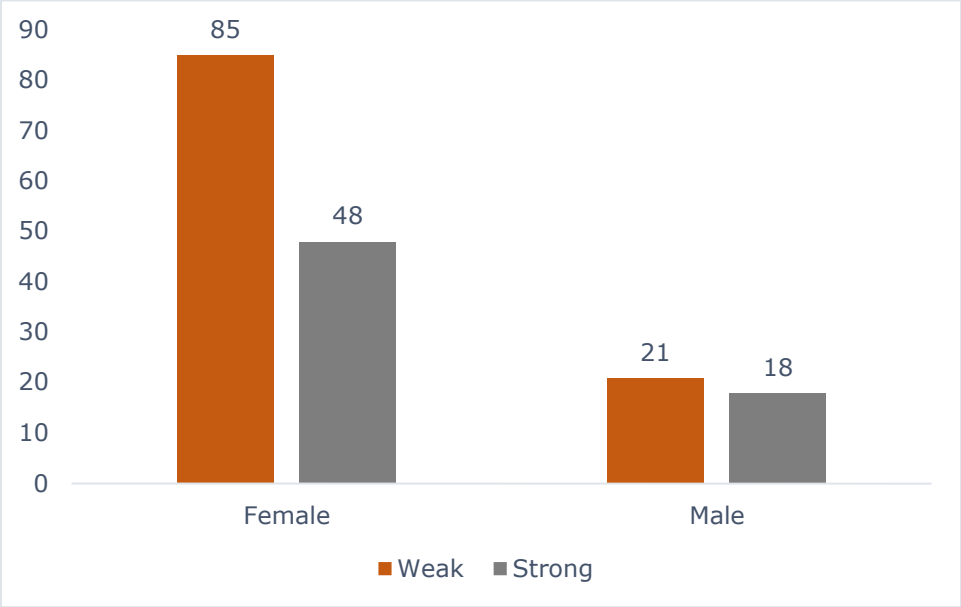


Figure 15. ***Personal SOC per age***

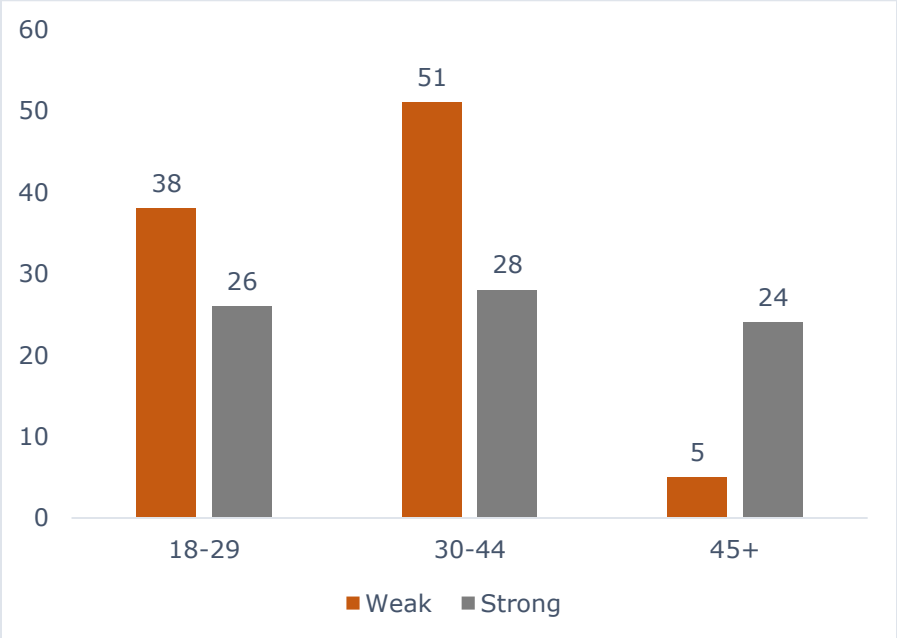


Table 4

Demographic characteristics, PTSD, SOCC by Personal SOC

			Personal Sense of Coherence		
Variable	N	Overall, N = 172[1]	Weak SOC, N = 106[1]	Strong SOC, N = 66[1]	p-value[2]
Region	172				0.3
North West		76 (44%)	50 (47%)	26 (39%)	
South West		96 (56%)	56 (53%)	40 (61%)	
Sex	172				0.3
Female		133 (77%)	85 (80%)	48 (73%)	
Male		39 (23%)	21 (20%)	18 (27%)	
Age category (Years)	172				0.8
18-29		64 (37%)	38 (36%)	26 (39%)	
30-44		79 (46%)	51 (48%)	28 (42%)	
45+		29 (17%)	17 (16%)	12 (18%)	
Age in Years	172	34 (27, 42)	34 (27, 42)	32 (26, 42)	0.8
Marital Status	172				>0.9
Single		79 (46%)	48 (45%)	31 (47%)	
Married/Cohabiting		65 (38%)	41 (39%)	24 (36%)	
Widowed/Divorced/Separated		28 (16%)	17 (16%)	11 (17%)	
Number of Children	172				0.2
None		34 (20%)	17 (16%)	17 (26%)	

			Personal Sense of Coherence		
Variable	N	Overall, N = 172[1]	Weak SOC, N = 106[1]	Strong SOC, N = 66[1]	p-value[2]
1-2 children		42 (24%)	25 (24%)	17 (26%)	
3-4 children		44 (26%)	26 (25%)	18 (27%)	
5 + children		52 (30%)	38 (36%)	14 (21%)	
Number of Children	172	3.00 (1.00, 5.00)	3.00 (1.00, 5.00)	2.00 (0.25, 4.00)	**0.047**
Level of Education	171				0.3
Primary		35 (20%)	23 (22%)	12 (18%)	
Secondary		90 (53%)	59 (56%)	31 (48%)	
Tertiary		46 (27%)	24 (23%)	22 (34%)	
Unknown		1	0	1	
Family Economic Status	172				**0.012**
Much less than average		74 (43%)	55 (52%)	19 (29%)	
Less than average		79 (46%)	41 (39%)	38 (58%)	
Average		19 (11%)	10 (9.4%)	9 (14%)	
More than average		0 (0%)	0 (0%)	0 (0%)	
Much more than average		0 (0%)	0 (0%)	0 (0%)	
Presence of PTSD	172				>0.9
No PTSD		10 (5.8%)	6 (5.7%)	4 (6.1%)	
Probable PTSD		162 (94%)	100 (94%)	62 (94%)	

		Personal Sense of Coherence			
Variable	N	Overall, N = 172[1]	Weak SOC, N = 106[1]	Strong SOC, N = 66[1]	p-value[2]
Sense of Community Coherence (SoC)	172				>0.9
Negative SoC		65 (38%)	40 (38%)	25 (38%)	
Positive SoC		107 (62%)	66 (62%)	41 (62%)	

[1]n (%); Median (IQR)

[2]Pearson's Chi-squared test; Wilcoxon rank sum test; Fisher's exact test

V. Sense of Community Coherence (SOCC)

A total of 65 participants had a weak SOCC and 107 had a strong SOCC. 37% of female (49) had a weak SOCC as well as 41% of male (16). Among the participants originating from the North West, 37% had a weak SOCC (28) and 39% of those in the South West equally had a weak SOCC. Out of the participants with PTSD 38% (61) had a weak SOCC, and 62% (101) had strong SOCC. Whereas 40% of participants with a weak SOCC had no PTSD as well 60% with a strong SOCC.

Figure 16. ***SOCC by region***

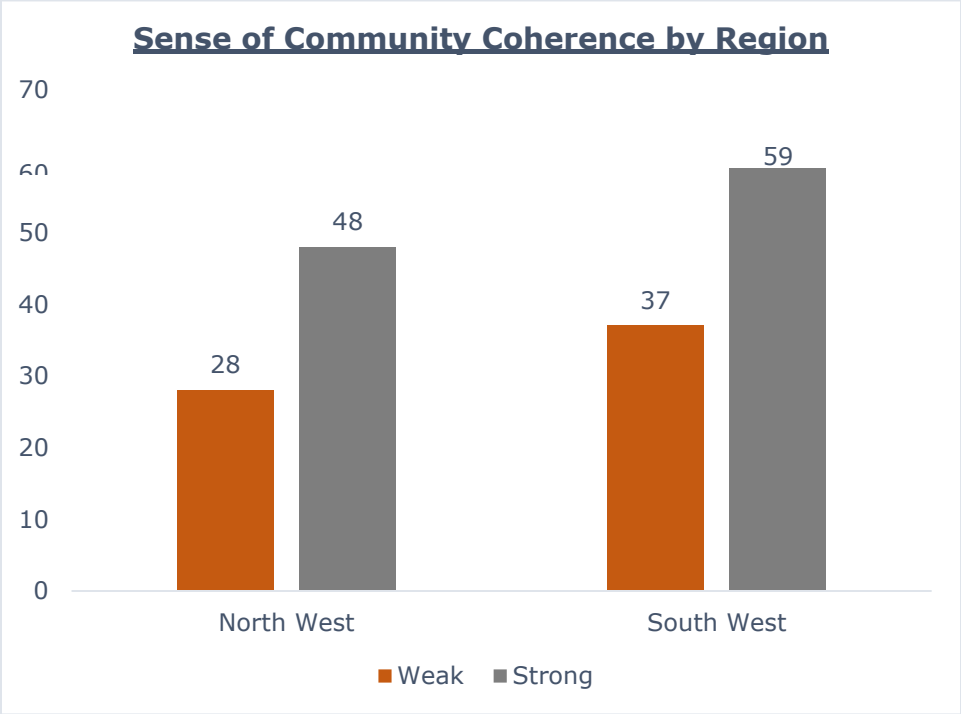


Figure 17. ***SOCC by gender***

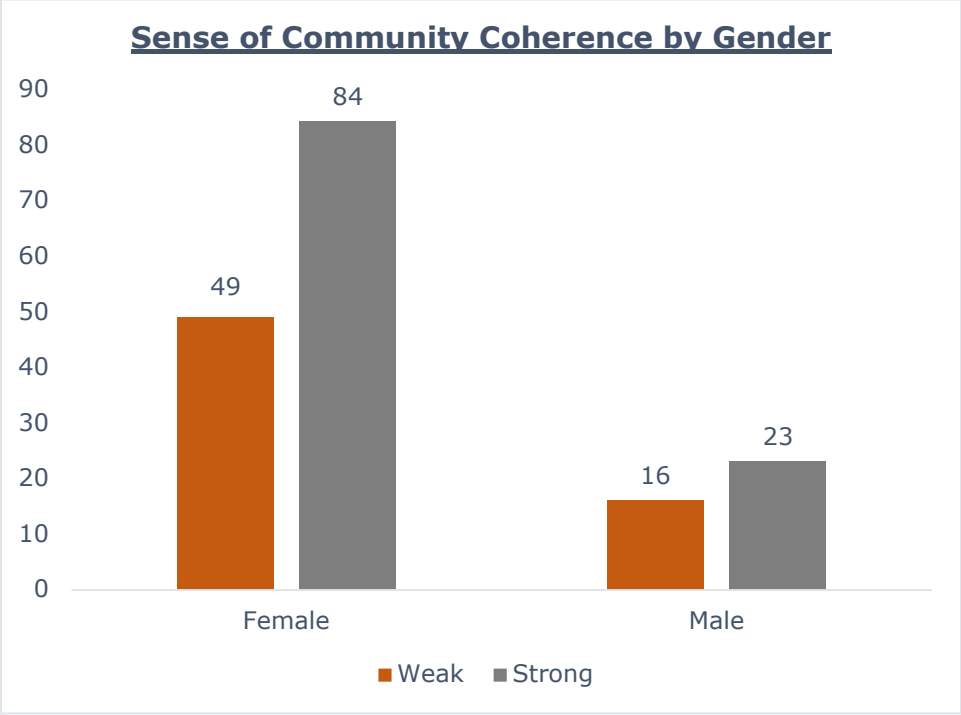


Figure 18. ***SOCC by age***

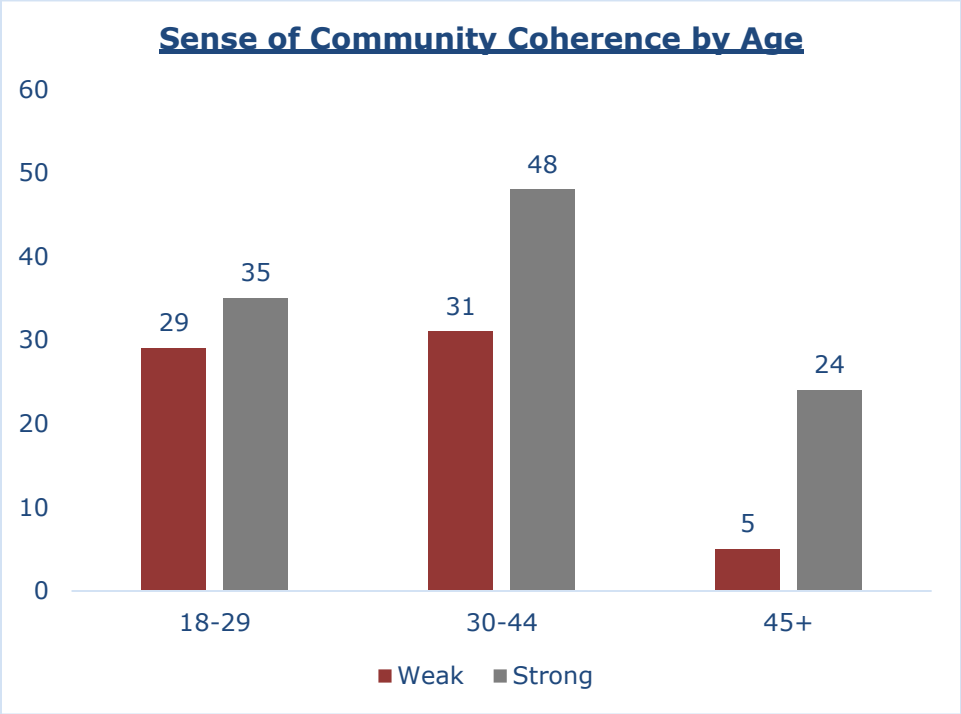


Table 5

Demographic characteristics, PTSD, Personal SOC by SOCC

			Sense of Community Coherence		
Variable	N	Overall, N = 172[1]	Weak SOCC , N = 65[1]	Strong SOCC, N = 107[1]	p-value[2]
Region	172				0.8
North West		76 (44%)	28 (43%)	48 (45%)	
South West		96 (56%)	37 (57%)	59 (55%)	
Sex	172				0.6

			Sense of Community Coherence		
Variable	N	Overall, N = 172[1]	Weak SOCC , N = 65[1]	Strong SOCC, N = 107[1]	p-value[2]
Female		133 (77%)	49 (75%)	84 (79%)	
Male		39 (23%)	16 (25%)	23 (21%)	
Age category (Years)	172				**0.033**
18-29		64 (37%)	29 (45%)	35 (33%)	
30-44		79 (46%)	31 (48%)	48 (45%)	
45+		29 (17%)	5 (7.7%)	24 (22%)	
Age in Years	172	34 (27, 42)	33 (25, 40)	34 (28, 42)	0.2
Marital Status	172				0.7
Single		79 (46%)	32 (49%)	47 (44%)	
Married/Cohabiting		65 (38%)	24 (37%)	41 (38%)	
Widowed/Divorced/Separated		28 (16%)	9 (14%)	19 (18%)	
Number of Children	172				0.12
None		34 (20%)	17 (26%)	17 (16%)	
1-2 children		42 (24%)	10 (15%)	32 (30%)	

		Sense of Community Coherence			
Variable	N	Overall, N = 172[1]	Weak SOCC , N = 65[1]	Strong SOCC, N = 107[1]	p-value[2]
3-4 children		44 (26%)	18 (28%)	26 (24%)	
5 + children		52 (30%)	20 (31%)	32 (30%)	
Number of Children	172	3.00 (1.00, 5.00)	3.00 (0.00, [illegible]	3.00 (1.00, 5.00)	0.6
Level of Education	171				0.5
Primary		35 (20%)	11 (17%)	24 (22%)	
Secondary		90 (53%)	33 (52%)	57 (53%)	
Tertiary		46 (27%)	20 (31%)	26 (24%)	
Unknown		1	1	0	
Family Economic Status	172				0.7
Much less than average		74 (43%)	30 (46%)	44 (41%)	
Less than average		79 (46%)	27 (42%)	52 (49%)	
Average		19 (11%)	8 (12%)	11 (10%)	
More than average		0 (0%)	0 (0%)	0 (0%)	
Much more than average		0 (0%)	0 (0%)	0 (0%)	
Presence of PTSD	172				>0.9

			Sense of Community Coherence		
Variable	N	Overall, N = 172[1]	Weak SOCC , N = 65[1]	Strong SOCC, N = 107[1]	p-value[2]
No PTSD		10 (5.8%)	4 (6.2%)	6 (5.6%)	
Probable PTSD		162 (94%)	61 (94%)	101 (94%)	
Orientation to Life (OtL)	172				>0.9
Weak SOC		106 (62%)	40 (62%)	66 (62%)	
Strong SOC		66 (38%)	25 (38%)	41 (38%)	

[1]n (%); Median (IQR)

[2]Pearson's Chi-squared test; Wilcoxon rank sum test; Fisher's exact test

Chapter 5 DISCUSSION

The objective of this study was to compare the relationship between Posttraumatic Stress Disorder, Personal and Community Sense of Coherence in Internally Displaced Persons belonging to communities in the North West and South West regions of Cameroon. A sample of 196 participants was computed and 172 individuals finally participated in the study, yielding a participation rate of 88%, considered as good response rate for a research (Gordon, 2002).

I. Personal and Community Sense of Coherence in internally displaced persons from the North West and South West regions of Cameroon.

The results reveal that majority of respondents (68%) had a weak SOC, that is, 106 out of 172. This finding is in line with previous studies on displaced populations. Several studies on displacements report weak SOC in individuals who migrate either voluntary or involuntary (Daniel & Ottemöller, 2022).

A quantitative study aiming at measuring the impact of exposure to violence, sense of control over one's life, economic difficulties, education on psychological distress of migrants coming from Turkish, Chile, Poland, Kudish, Iran and revealed that weak SOC was associated to migrant status and psychological distress (Sundquist & al, 2000).

In 2010, Pham & al. studied the association between SOC and prolonged cumulative exposure to traumatic event and violence. Of the 2635 respondents, 85.5% . Results showed that SOC was significantly weaker in IDPs (Phuong et al., 2010). Turnip & al in a longitudinal study on IDPs in Indonesia reported a weak SOC during the first year and

improvement with time due to economic stability (Turnip et al., 2016). Considering the low economic status of majority of respondents in this study, we can identify this as possible contributing factor to the weak SOC. Wilson and Mittelmark in their research on migrant women from Ghana found that improvement of respondents' financial stability and social network strengthened their SOC (Wilson & Mittelmark, 2013).

The weak SOC in this study can also be explained by trauma event load. Previous studies have established a negative correlation between trauma event load and SOC. Therefore cumulative traumatic experiences weakens the sense of coherence (Phuong et al., 2010).

Sense of Community Coherence

Majority of respondents, 107, reported a strong Sense of Community Coherence. This is in line with other studies revealing that collectivistic communities unlike individualistic ones have a strong sense of community coherence (Braun-lewensohn & Sagy, 2011; Daniel & Ottemöller, 2022; Mana & Sagy, 2015). The anglophone communities in Cameroon are characterised by solidarity, respect, integration etc (Mbaku, 2005; Nfi, 2014; *North-West Region - Presentation*, n.d.). However, the SOCC in participants from the North West region is weaker than those from the SW. This can be explained by the fact that this region is the epicentre of the war. Mistrust has been gaining ground as a result of the separatists attacking civilians from their communities.

II. Influence of Personal and Community SOC on the development of PTSD

Of the 172 respondents, 162 were screened positive for PTSD. This gives a percentage of 94. This rate is higher than those in previous studies measuring PTSD in individuals exposed to war and conflicts. However, a study conducted in Uganda on 2585 adults survivors of war between the Lord's Resistance Army, Ugandans People's Democratic

Army and the people of Northern Uganda indicated that 74.3% met criteria for PTSD (Vinck et al., 2007). Another study conducted 6 years after the genocide in Rwanda on a population of Rwandans and Burundians revealed a PTSD prevalence of 50% (De Jong et al., 2000; Vinck et al., 2007). The variation can be explained by the cut off score applied in computing. The study in Northern Uganda used a cut off score of 44 while a value of 31 was applied in this study based on the recommendations for interpreting scores of the PCL-5 civilian version (W. et al., 2018). This difference can equally be explained by the important trauma event load experienced by the participants. Every participant in this study experienced trauma through three out of the four form of traumatic encounters described in DSM-5, that is : direct experience, witness the event and learned about it. Moreover most of them have been repeatedly exposed to several forms of man-made trauma.

Influence of Personal SOC on PTSD

Results revealed negative correlation between Personal SOC and PTSD. For a unit increase in PTSD there is a -0.22 decrease in SOC This finding is in line with previous studies. Pham & al. In DR Congo found a negative correlation between PTSD and SOC (Phuong et al., 2010). The first meta-analysis study comprising of the analysis of 47 cross-sectional studies from 1996 to 2017, with a total of 10,883 participants revealed a negative correlation between SOC and PTSD in the aftermath of traumatic events(Schäfer et al., 2019). A study investigating some risk and protective factors in the development of PTSD on fire fighters in Germany revealed that SOC correlated negatively with the severity of PTSD (Schnell et al., 2020).

Community SOC and PTSD

Concerning SOCC, to the best of our knowledge, no research has been conducted on its relationship with PTSD. Our findings however reveal that there is no association between SOCC and PTSD. results showed that a strong SOC increases the odd of developing PTSD. This can be explained by the nature of the conflict in the affected communities. As mentioned above separatists are members of the communities. Civilians who are victims of their attacks might not only suffer from the consequences of the traumatic experiences but the feeling of betrayal might exacerbate their distress.

Table 6

Structural Equation Modelling

Log likelihood = -2013.92

	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
ptsd_score						
soc_score	.1396838	.1619233	0.86	0.388	-.1776801	.4570477
otl_score	-.217509	.0967856	-2.25	0.025	-.4072053	-.0278128
_cons	60.79095	5.289529	11.49	0.000	50.42367	71.15824
mean(soc_score)	25.86047	.6026535	42.91	0.000	24.67929	27.04164
mean(otl_score)	36.97674	1.008246	36.67	0.000	35.00062	38.95287
var(e.ptsd_score)	276.7673	29.84458			224.0409	341.9024
var(soc_score)	62.4689	6.736195			50.56808	77.1705
var(otl_score)	174.8483	18.85438			141.5383	215.9976
cov(soc_score,otl_score)	13.85141	8.038585	1.72	0.085	-1.903931	29.60674

CONCLUSION

As of February 2022, OCHA reported 573 900 individuals displaced because of conflicts in the North West and South West regions of Cameroon (OCHA, 2022). This massive displacement ranks Cameroon as the second nation with the highest number of IDP after DR Congo, in Africa. On the other hand, the disastrous consequences of displacement are well documented. Our study, in line with many others, revealed a negative correlation between Personal SOC and PTSD. Even though no correlation was established between Community Sense of Coherence and PTSD, our findings suggest that enhancing Personal SOC in IDP through an improvement of their socioeconomic conditions will prevent further breakdown after experiencing these inordinate events.

Study limitation

The study is descriptive and does not provide explanation on the direction between the variables. Information on the traumatic encounter was retrospective and little is known about other traumatic experiences where participants resettled. Besides that, all the participants were recruited in local NGOs and they were still expecting psychosocial support. This might have intensify their distress. We equally do not have baseline information on their SOC prior to exposure to conflicts. Therefore we cannot attribute the weak SOC solely to trauma exposure and displacement.

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ANNEXES

1 - Informed Consent Form

Title of the study: ***"Meaning making and Posttraumatic Stress Disorder in the Cameroonian context: Personal and Community Sense of Coherence in Internally Displaced Persons from the North West and South West Regions."***

Principal investigator: Edwige Emilie Kouamen Tatto

Information on the study

- Aim of the study

This research is meant to comparing the relationship between Posttraumatic Stress Disorder, Personal and Community Sense of Coherence in internally displaced persons from the North West and South West regions of Cameroon. Questions about stressful events you experienced in your region and how you have been bothered by them will be asked. We will also ask questions related to various aspects of life, and lastly questions about your perception of your community. If you agree to participate, we will request you to sign this form at the end.

- Possible risks

In this research risk to participation is kept a minimum. However, some questions in this study might trigger painful memories. We assure you that the researcher is skilled enough to help you manage them and if necessary referral for special care will be made.

- Procedure

After reading and signing this consent form, we kindly ask you to fill out the questionnaire to the best of your knowledge. The information collected will be used for the above-mentioned purpose.

- Time Commitment

You may require 25 - 30 minutes to complete the questionnaire.

- Confidentiality

Information collected will be kept from inappropriate disclosure and treated anonymously, while ensuring the greatest possible discretion. To further enhance confidentiality, we ask you not to put your name on the questionnaire.

- Voluntary nature of participation

We declare that participation is voluntary and that the refusal to participate has no consequences. Furthermore, you are free to discontinue your participation at any moment in the process.

- Contact person to answer questions about research and the rights of participants
    - The principal investigator: Edwige Emilie Kouamen Tatto
      University of Nairobi
      +254 743 807 194
      emiliekouamen@students.uonbi.ac.ke
    - KNH-UoN ERC: uonknh_erc@uonbi.ac.ke
    - Supervisors: Dr Anne Mbwayo, Dr Lincoln Khasakhala, Pr. Dr. habil. Roland Weierstall-Pust, Pr Jean Baptiste Fotso Djemo

Place..... Date …….....

Participant's signature Investigator's signature

2 - Research Questionnaire

Title of the study: *"Meaning making and Posttraumatic Stress Disorder in the context of Cameroonian culture: Personal and Community Sense of Coherence in Internally Displaced Persons from the North West and South West Regions."*

Part One- General Information

Date: _____

1. **Gender:** Female ☐ Male ☐ Diverse ☐
2. **Age:**
3. **Marital status:** Single ☐ Cohabitation ☐ Married ☐ Divorce ☐ Separated ☐
4. **Number of Children:**
5. **Ethnicity/Cultural background:** Boyo ☐ Bui ☐ Donga Mantung ☐ Menchum ☐ Mezam ☐ Momo ☐ Ngoketunjia ☐

Fako ☐ Kupe-Muanenguba ☐ Lebialem ☐ Manyu ☐ Meme ☐ Ndian. ☐

6. Education Level : Primary ☐ Secondary ☐ Tertiary ☐
7. **Place of residence?**

   A.Quarter/neighborhood _____

8. **In comparison to the average family income in Cameroon, how would you define the economic status of your family**? (of all family members in your household) Please mark the most suitable reply

Much less than the average.	Less than average	About average	More than average	Much more than average
1	2	3	4	5

Part Two: Trauma event list:

The list below captures the different traumatic events people have experienced since the beginning of the NOSO crisis. Kindly indicate in the boxes below if a) You have directly experienced the event; b) witness it happened to another person; c) you learned it happened to a loved one; d) you were exposed to it as part of your job (e.g police, firefighter); e) It doesn't apply to you.

	Trauma Event	**Happened to me**	**Experienced it**	**Learned about it**	**Part of my job**	**Doesn't apply**
General Trauma Exposure						
1	Natural disaster (for example, flood, hurricane, tornado, earthquake)					
2	Fire or explosion					
3	Transportation accident (for example, car accident, boat accident, train wreck, plane crash)					
4	Serious accident at work, home, or during recreational activity					
5	Exposure to toxic substance (for example, dangerous chemicals, radiation)					
6	Life-threatening illness or injury					
7	Severe human suffering					
8	Sudden violent death (for example, homicide, suicide)					

9	Sudden accidental death					
10	Any other very stressful event or experience					
Trauma exposure during arm conflicts						
11	Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)					
12	Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)					
13	Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)					
14	Other unwanted or uncomfortable sexual experience					
15	Combat or exposure to a war-zone (in the military or as a civilian)					
16	Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)					
17	Serious injury, harm, or death you caused to someone else					
18	Gunshots					
19	Kidnapping					

20	Killing					
21	Looting					
22	Burning of properties					
23	Arbitrary arrest					
24	Illegal detention					
25	Death threats					
26	Forced enrollment into armed groups					
27	Torture					
28	Loss of loved ones					
29	Missing relatives					
30	Harassment					

Part Three: Post Traumatic Stress Disorder Checklist

Instructions: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, and then circle one of the numbers to the right to indicate how much you have been bothered by the problem in the past month

	BOTHERED	**NOT AT ALL**	**A LITTLE BIT**	**MODERATELY**	**QUITE A BIT**	**EXTREMELY**
1	Repeated, disturbing, and unwanted memories of the stressful experience?					
2	Repeated disturbing dreams of the stressful experience?					
3	Suddenly feeling or acting as if the stressful experience were actually happening					

	again (as if you were actually back there reliving it)?					
4	Feeling very upset when something reminded you of the stressful experience?					
5	Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?					
6	Avoiding memories, thoughts, or feelings related to the stressful experience?					
7	Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?					
8	Trouble remembering important parts of the stressful experience?					
9	Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, and the world is completely dangerous)?					
10	Blaming yourself or someone else for the stressful experience or what happened after it?					
11	Having strong negative feelings such as fear, horror, anger, guilt, or shame?					
12	Loss of interest in activities that you used to enjoy?					
13	Feeling distant or cut off from other people?					
14	Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for					

	people close to you)?					
15	Irritable behaviour, angry outbursts, or acting aggressively?					
16	Taking too many risks or doing things that could harm you?					
17	Being “super alert” or watchful or on guard?					
18	Feeling jumpy or easily startled?					
19	Having difficulty concentrating?					
20	Trouble falling or staying asleep?					

Part Four: Orientation to Life Questionnaire, SOC-13

Here is a series of questions relating to various aspects of our lives. Each question has seven possible answers. Please mark the number which expresses your answer, with numbers 1 to **7**. If the
words under 1 are right for you, circle 1; if the words under **7** are right for you, circle **7**. If you feel different, circle the number which best expresses your feeling. Please give only one answer to each question.

1. Do you have the feeling that you don't really care about what goes on around you?						
1 Very seldom or never	2	3	4	5	6	7 Very often

2. Has it happened in the past that you were surprised by the behaviour of people whom you thought you knew well?						
1 Never happened	2	3	4	5	6	7 Always happened

3. Has it happened that people whom you counted on disappointed you?

1 Never happened	2	3	4	5	6	7 Always happened

4. Until now your life has had:						
1 No clear goal or purpose at all	2	3	4	5	6	7 Very clear goals and purpose

5. Do you have the feeling that you're being treated unfairly?						
1 Very often	2	3	4	5	6	7 Very seldom or never

6. Do you have the feeling that you are in an unfamiliar situation and don't know what to do?						
1 Very often	2	3	4	5	6	7 Very seldom or never

7. Doing the things you do every day is:						
1 A source of deep pleasure and satisfaction.	2	3	4		6	7 A source of pain and boredom

8. Do you have very mixed-up feelings and ideas?						
1 Very often	2	3	4	5	6	7 Very seldom or never

9. Does it happen that you have feelings inside you would rather not feel?						
1 Very often						7 Very seldom or never

10. Many people - even those with a strong character - sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past?						
1 Never	2	3	4	5	6	7 Very often

11. When something happened, have you generally found that:						
1 You overestimate or underestimate its importance	2	3	4	5	6	7 You saw things in the right proportion.

12. How often do you have the feeling that there's little meaning in the things you do in your daily life?						
1 Very often	2	3	4	5	6	7 Very seldom or never

13. How often do you have feelings that you're not sure you can keep under control?						
1 Very often						7 Very seldom or never

Part Five: Sense of Community Coherence

1.	To what degree is the future of your ethnic community clear						
	1	2	3	4	5	6	7
	Not clear at all						Very clear

2.	Do you think that your ethnic community has clear aims and goals?						
	1	2	3	4	5	6	7

	Not at all		Very much

3.	To what degree do you feel that your ethnic community is capable of coping with the challenges of the future						
	1	2	3	4	5	6	7
	Completely incapable						Fairly capable

4.	Do you feel that the members of your ethnic community are apathetic and indifferent to what is happening in the region?						
	1	2	3	4	5	6	7
	Not at all						Largely

5.	When your ethnic community is faced with a severe problem, the choice of a solution is						
	1	2	3	4	5	6	7
	Always confusing and hard to find						Obvious and completely clear

6.	To belong to an ethnic community gives meaning and purpose to its members' life?						
	1	2	3	4	5	6	7
	Completely untrue						Very true

7.	To what extent do you feel that your ethnic community has an influence on what happens in your region?						
	1	2	3	4	5	6	7
	Not at all						Very much

REPUBLIQUE DU CAMEROUN
Paix - Travail- Patrie
•
UNIVERSITE DE DOUALA

REPUBLIC OF CAMEROON
Peace - Work- Fatherland
•
UNIVERSITY OF DOUALA

CEI - UD

INSTITUTIONAL ETHICS COMMITTEE FOR RESEARCH ON HUMAN HEALTH

N°2912 IEC-UD/09/2021/M

Douala, the 2nd of September 2021

ETHICAL CLEARANCE

The Institutional Ethics Committee for Research on Human Health of the University of Douala **(IEC-UDo)** for the 2nd of September 2021 evaluation session, has examined the research project entitled **«Meaning making and PTSD in the Cameroonian context : Personal and Community Sense of coherence in internally displaced persons from the Anglophone regions »** submitted by **KOUAMEN TATTO Edwige Emilie** for Memoire at the University of Nairobi.

The present research project has a clear scientific interest and presents no risk for its participants. The objectives and methodology of this research project are clearly described. The principle of data confidentiality is respected. The required expertise for the supervision of the research is present.

From the above mentioned observations, the IEC-UDo approves this version of the project for a period of one year.

However, **KOUAMEN TATTO Edwige Emilie** is responsible of the scrupulous respect of the methodology and ethical consideration, and should not amend it without approval of the IEC-UDo. Researchers are expected to collaborate with the IEC-UDo for a follow-up of the ethical aspects of the approved project. A copy of the final report of this research project should be submitted to IEC-UD for archival purposes.

The present ethical clearance is delivered to serve the purpose for which it is presented. It can be cancelled in case of non-respect of the above recommendations.

Copy

- **MINPH**

CEI-UD

The PRESIDENT

Pr Léopold Gustave LEHMAN

NB : Only one copy of an ethical clearance is delivered

Centre pour la Réhabilitation des Victimes de la Violence et de la Torture

Centre for the Rehabilitation of Victims of Violence and Torture

Trauma Centre

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Tel.(237)cel 675 518 161
E-mail : tc_rehabilitation@yahoo.com

TRAUMA CENTRE

ARRETE N° 2018/AS/0027/A/MINAS/CAB/IG du 07/12/2018

Yaounde, 15th March 2022

To: Kouamen Tatto Edwige Emilie

RE: APPROVAL FOR RESEARCH

This is to inform you that Trauma Centre Cameroon has received and approved your research project entitled:

"Meaning making and PTSD in the Cameroonian context: Personal and Community Sense of Coherence in Internally Displaced Persons from the North West and South West Regions"

By this letter authorisation is granted to conduct your research in our premises in respect of principles governing the Centre. We equally expect a copy of the final thesis upon completion.

Sincerely, '

Centre for the Rehabilitation of Victims of Violence and Torture
TRAUMA CENTRE
B P 30346 Yaoundé 13
Cameroun
Centre pour la Réhabilitation des Victimes de la Violence et de la Torture

Peter Kum Che Mebeng

Executive Director

HOPE AND REHABILITATION ORGANIZATION

HaRO

Yaounde, 17th March 2022

To: Kouamen Tatto Edwige Emilie

RE: APPROVAL FOR RESEARCH

This is to inform you that HaRO has received, reviewed and approved your request to conduct research within its premises.

By this letter authority is hereby granted to start the study upon presentation of the original copies of academic clearances. You are requested to submit a copy of your dissertation when the study is completed.

We wish you a fruitful research.

Sincerely,

Fritz Kwa Mendi

National Coordinator

UNIVERSITY OF NAIROBI
FACULTY OF HEALTH SCIENCES
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Telegrams: MEDSUP, Nairobi

Ref: KNH-ERC/A/80

7th March, 2022

Kouamen Tatto Edwige Emilie
Reg. No. H56/35782/2019
Dept. of Psychiatry
Faculty of Health Sciences
University of Nairobi

Dear Emillie,

RESEARCH PROPOSAL: MEANING MAKING AND POSTTRAUMATIC STRESS DISORDER IN THE CAMEROONIAN CONTEXT; PERSONAL AND COMMUNITY SENSE OF COHERENCE IN INTERNALLY DISPLACED PERSONS FROM THE NORTH WEST AND SOUTH WEST REGIONS (P716/09/2021)

This is to inform you that KNH-UoN ERC has reviewed and approved your above research proposal. Your application approval number is **P716/09/2021.** The approval period is 7th March 2022 – 6th March 2023.

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by KNH-UoN ERC.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to KNH-UoN ERC 72 hours of notification.
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to KNH-UoN ERC within 72 hours.
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to KNH-UoN ERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

DR. BEATRICE K.M. AMUGUNE
SECRETARY, KNH-UoN ERC

c.c. The Dean, Faculty of Health Sciences, UoN
The Senior Director, CS, KNH
The Chairperson, KNH- UoN ERC
The Chair, Dept. of Psychiatry, UoN
Supervisors: Dr. Anne Wanjiru Mbwayo, Dept. of Psychiatry, UoN
Prof. Muthoni Mathai Dept. of Psychiatry, UoN
Prof. Dr. habil. Roland Weierstall-Pust, Medical School Hamburg, Germany
Prof. Jean-Baptist Fotso Djemo, Université des Montagnes, Cameroon