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Combat-Related Posttraumatic Stress Symptoms, Social Support, and Social Anxiety: The Case of Combats and Veterans in Ministry of Defence and Veteran Affairs Republic of South Sudan

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A DISSERTATION

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DECLARATION

I **Michael Deng De Monychol Achuil**, a PhD student of Clinical Psychology in Selinus University and Literature declares that the work in this thesis is my own original work and has never been published and submitted to any institution of higher learning. I certify that all the materials in the thesis which is not my owned has been identified and acknowledged.

STATEMENT OF APPROVAL

This research thesis has been successfully done under my supervision and in accordance with the University's research standards.

Sign…….

Professor Dr. Salvatore Fava.

Date…….

SELINUS UNIVERSITY OF SCINECE AND LITERETRURE SCHOOL OF PSYCHOLOGY

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DEDICATION

In letter of sincerity and honesty, I present this thesis to the honor of my Father Combatant Brigadier General. ***Francis Monychol Achuil Michar***, a professional Sudan People's Liberation Army trained in 1984, Koryom battalion, currently a wounded Hero, my beloved Mother Combatant Mary Alei Waar Deng of bright Star Campaign, my beloved wife Rebecca Monytiok Akot, My Daughter Nyandhueng Deng, My Son Bany Deng, Achuil Deng and Loi Deng, my siblings, Ministry of defense and Veteran Affairs and Greater Pioneer Oil Company. without their moral and financial support, I would not have achieved this piece of work towards my **PhD degree** in Clinical Psychology and above all to Glory to God Almighty.

Contents

KNOWLES, K. A., SRIPADA, R. K., DEFEVER, M., & RAUCH, S. A. M. 2019. Comorbid mood and anxiety disorders and severity of posttraumatic stress disorder symptoms in treatment-seeking

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OPERATIONAL DEFINITIONS.

Anxiety: The condition of general pervasive fear affecting a patient

Binary: Relating to or involving the use of two situation meeting together

Combatant: Men and women in active military service or armed forces

Comorbid:

Depression: Mental state characterized by excessive sadness.

Frequency distribution: Presentation of the characteristics (variables) of a series of individuals, or the measurement are clustered so as to indicate the proportion that have different occurrences.

Impairment: Inability to function effectively or handicap

Military: The company or unit of combatants trained to carry guns and rifles in an organized manner.

Posttraumatic disorder: An anxiety disorder caused by major physical or emotional trauma, such as injury, assault, rape, or exposure to warfare or disaster causing disability or casualty.

Psychiatrist disorder: Inability of the brain to function effectively or normally.

Prevalence: The measure of morbidity based on current levels of disease in a population, estimated either at a particular time.

Psychology: The science of the functioning of living organism and of their component part including brain**.**

Trauma: (In psychology) an emotionally painful and harmful event, * posttraumatic disorder may follow an overwhelmingly stressful event, such as battle, assault or serious injury.

Veteran: An ex-combat or a member of retired military officer or soldier who was involved in an active frontline operation.

ABSTRACT

Background; Epidemiological research revealed the prevalence and burden of social anxiety among military veterans are given limited attention as compared to other psychiatric disorders. Social anxiety causes significant distress or impairment and it impairs work performance, increases isolation and highly comorbid with other psychiatric disorders associated with low help seeking. The main objectives were to assess the influence of combatant Posttraumatic stress symptoms, social support, and social anxiety among Veterans in Ministry of Defense and Veteran affairs in South Sudan to develop an inclusive model for the improvement of the wellbeing of Veterans.

Methods; the study adopted cross sectional study design which was conducted in military base to assess influence of combatant Posttraumatic stress symptoms, social support, and social anxiety among Veterans. Frequency distribution was used to describe the characteristics of the respondents, chi-square test assessed level of social anxiety and independent variables and binary logistic regression analysis determine influence of each categorical predictor variables on social anxiety and the results were reported using odds ratio at a 95% level of confidence.

Results; 370 respondents participated in this study,66.22% had high level of social anxiety while 33.78% had low level of anxiety. The following factors were found associated with social anxiety including sex of the respondents mostly male respondents had reduced chances of experiencing high level of social anxiety unlike female counterparts (OR=0.329;95%CI:0.119 to0.908; p=0.032). Respondents aged 31 to 40 years and those 41 to 50 years had less chances of experiencing high level of social anxiety unlike those 50 years above (OR=0.146;95%CI:0.039 to 0.545; p=0.004) and (OR=0.248;95%CI:0.07 to 0.879) respectively. Dinka had reduced likelihood of high level of social anxiety as compared to those combatants in other tribes (OR=0.487;95%CI:0.254 to 0.931),

Place of growth of the respondents had significant relationship with experience of high level of social anxiety, respondents that grew up from village, boma and payam had less chances of high level of social anxiety unlike those who grew up from state capital [(OR=0.246;95%CI:0.077 to 0.784;p=0.018),(OR=0.276;95%CI:0.085 to 0.899;p=0.033) and (OR=0.209;95%CI:0.038 to 1.140;p=0.071)] respectively.

Respondents that had single marital status had less chances of experiencing high level of social anxiety unlike those who had separated (OR=0.094;95%CI:0.009 to 0.949; p=0.045).

Respondents who had attained high school equivalent level of education were more likely to experience high level of social anxiety unlike those with non-formal education (OR=1.924;95%CI:1.039 to 3.561; p=0.037).

Conclusions; the prevalence of posttraumatic disorder and social anxiety among veterans and combats was high in the Republic of South Sudan army as compared to findings in the US.

Recommendations; therefore, its recommended that the government of South Sudan need to initiate livelihood programs for veterans to support them during retirement as the monthly income cannot sustain them appropriately with continues mental health programs

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CHAPTER ONE

1.0. Introduction

The prevalence of Post-traumatic stress disorders also known as invisible wound among Iraq and Afghanistan combat veterans was approximated 10 to 30% with highest burden reported among those with multiple combat tours (Armenta et al., 2018b). Despite this fact, most combat veterans do not seek medical care frequently due to stigma (Hoge et al., 2014). In addition, by 2020, about 13 million Americans had experienced post-traumatic stress disorders (PTSD) and about five in every 100 adult experienced it every year (Gruessner, 2023). Moreso, Veterans are more likely to experience PTSD than civilians mostly those deployed to a war zone.

Reported by Hoge et al, indicated that interventions and programs should be implemented by military leaders and medical providers to reduce stigma and quitting treatment (Congressional Budget Office, 2012). Early strategies, therapies and individualized treatment models were recommended to improve the care of veterans with post-traumatic stress disorders. A study conducted among combat veterans in US indicated that old age, deployment with high combat exposures, enlisted rank, initial post traumatic disorders severity, depression, history of physical assault, disabling injury and somatic symptoms significantly contributed to post traumatic stress disorders (Armenta et al., 2018a). this congers with the systematic review which found that loneliness, experience related to the military service impacted on the social relation isolation of the combatants (Wilson et al., 2018).

1.2. Statement of the problem

In South Sudan, post-traumatic stress disorders were reported among 40.7% of the respondents had post-traumatic stress disorder (Ng et al., 2017). However, this study reported post-traumatic stress disorders in the entire population. Respondents with posttraumatic stress disorders endorsed confessions, apologies and amnesty while reported compensation and prosecution were not necessary for reconciliation in South Sudan (Ng et al., 2017).

In South Sudan, mental health is important since the majority of the population had been exposed to high rates of violence, displacement and political as well as social insecurity. The post conflict study done in Juba showed that 36% of the sampled population had post-traumatic stress disorders and 50% had depression.

Also, another study conducted among Sudanese refugees in northern Uganda revealed that 46% of them had post-traumatic stress disorders while 48% of those who remained in the country had post-traumatic stress disorders. There was high prevalence of mental illness among south Sudanese while there was potential increase in psychiatric diseases in the general population (Ameresekere and Henderson, 2012). There are limited studies that had assessed the posttraumatic stress disorders among combatants in South Sudan while another study conducted among south Sudanese women in the US revealed high level of trauma and trauma associated mental disorders especially PTSD (48%), depression (59%), and anxiety 26% (Tutlam et al., 2020).

1.3. Research Objectives

1.3.1. Main Objectives

To assess the influence of combatant Posttraumatic stress symptoms, social support, and social anxiety among combats and veterans in Ministry of Defense and Veteran affairs in South Sudan to develop an inclusive model for the improvement of the wellbeing of Veterans.

1.3.2. Specific Objectives

i. To analyze the influence of Posttraumatic stress symptoms on social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan.
ii. To assess the relationship between social support and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan.
iii. To evaluate the mediating effect of social support on posttraumatic stress disorder and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan.

1.3.3. Research Questions

i. What is the influence of Posttraumatic stress symptoms on social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan?
ii. What is the relationship between social support and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan?
iii. What is the mediating effect of social support on posttraumatic stress disorder and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan?
iv. what is the influence of integration of mental health into existing health care on posttraumatic stress disorder and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan?

1.4. Hypothesis

Ho1: Posttraumatic stress symptoms have no influence on social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan.

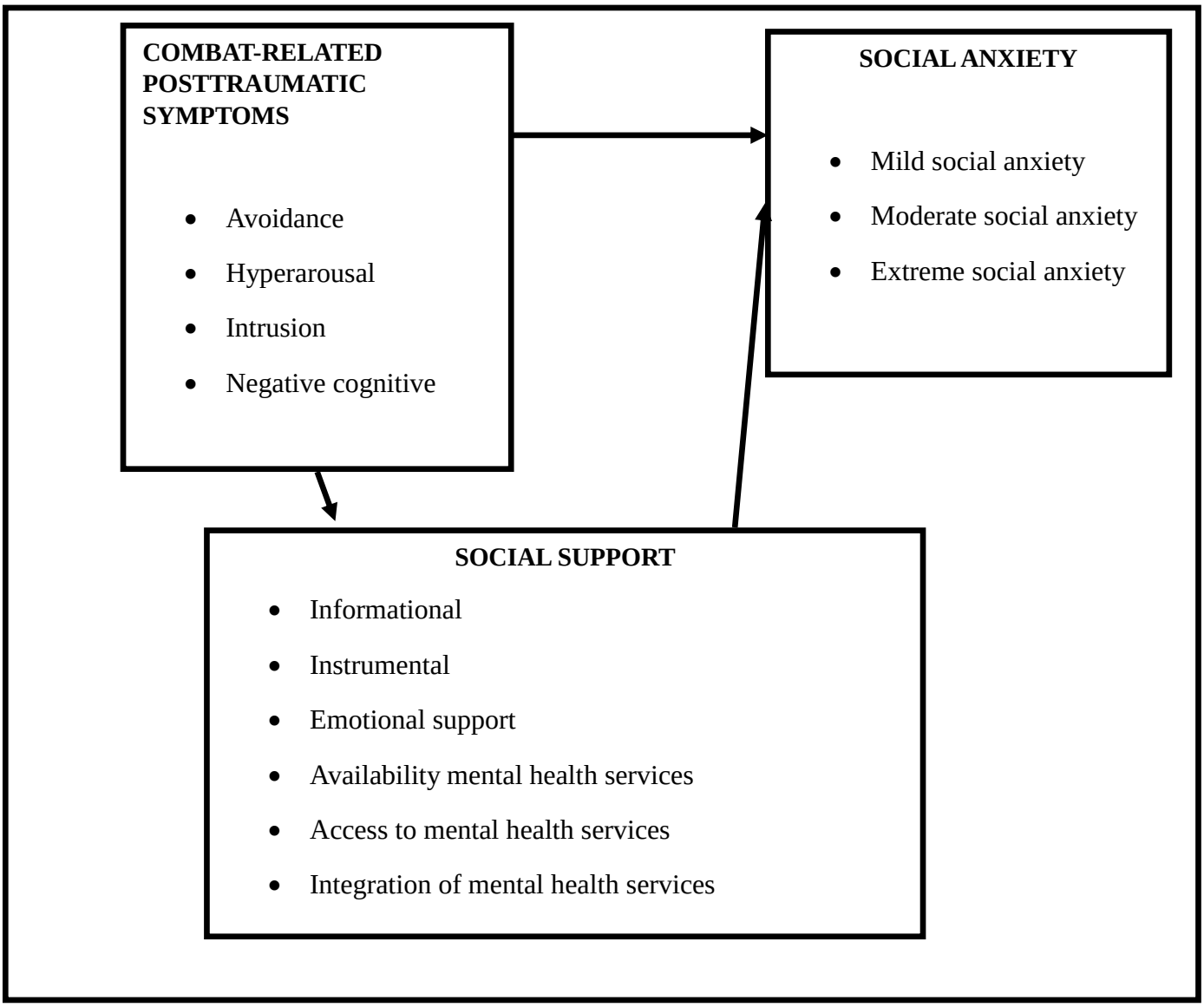
Ho2: There is no relationship between social support and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan.

Ho3: There is no mediating effect of social support on posttraumatic stress disorder and social anxiety among Veterans in Ministry of Defense and Veteran affairs in South Sudan.

Ho4: There is not relationship between integration of mental health services into existing health care on posttraumatic stress disorder and social anxiety among Veterans in Ministry of Defense and Veteran affairs in South Sudan.

CONCEPTUAL FRAMEWORK

INDEPENDENT **DEPENDENT**



Source: Researcher initiated

Figure 1 shows conceptual frame work on influence of posttraumatic stress disorders on social anxiety

Source is the researcher, 2024

1.5. Justification of the study

Previous studies reported social anxiety about either among civilians or military population but the two groups were never assessed together. Assessing influence of posttraumatic stress symptoms on social anxiety among combatants gives meaningful insights on the type of interventions to help them cope with the world. Multiple studies have documented population based-war related mental health disorders due to armed conflict, but there are limited studies that have examined mental health disorder symptoms experienced by military/combatants. Thus, seeks to fill this gap to establish influence of posttraumatic stress disorders on social anxiety of combatants. The study will establish negative health effects that result from armed conflict among the soldiers and combatant for deeper insights into the types of symptoms and severity. The study will support designing interventions to maintain mental health well-being of the military personnel in the face of severe challenges they encounter.

1.6. Theoretical perspectives

1.6.1. Social support theory

In the current study, social support theory has been envisaged as the ideal theory that the study will be hinged on. Social support theory looks at stressing factors and the available coping strategies. The component of stress has been divided into three perspectives, which are the; social, psychological, and biological perspectives (Cohen et al., 1997). In this study, the social perspectives will guide the study where informational, instrumental, and emotional support of the veterans will be assessed. Scholars have shared a common perspective concerning social support theory which involves the influence of the external environment/psychological demands that impact on the emotional wellbeing surpassing people's adaptive capacity, and the outcome is biological and psychological changes that have the potential to affect an individual's health and psychosocial well-being (Cohen et al., 1997; Contrada, 2011).

In a study to access social support and its rationale in the field of nursing, Stewart (1993) found a cocktail of sub-theories under social support which includes the social comparison theory, coping theory, social exchange theory, social learning theory, social competence theory, and attribution theory.

According to (Williams, 2005), the most important components of discussion in social support is the stress, coping and social support theory. Williams asserts that, the inter-relationship between stress, coping and social support paradigm have been employed in relation to psychological and physiological health, which justifies employing the stress and coping theory and social support theory in the present study.

The social support theory has been used to assess social support among various groups including military veterans, and research fields including the elderly population. The theory is believed to reduce the would-be effects of stressful events due to the presence of support systems like family, environment, community, friends, and the existence of fellow citizens among veterans. Several theories have been deployed to explain the relationship between social support and PTSD related to social anxiety disorders. The main effect theory and stress buffering theory. In the current study the social support theory is ideal since it depicts that social support is paramount in averting the negative events of PTSD.

1.7. Models for integration of mental health services into existing health care on posttraumatic stress disorder and social anxiety among Veterans

Utilization of health care services represents adaptive approach for coping with and recovery from multiple mental health problems. In all diagnosis, utilization of mental health care services has significant relation with reduction and improvements in psychosocial functions which applicable to mental health among veterans such depression (Cuijpers et al., 2020), posttraumatic stress disorders (PTSD) (Kline et al., 2018) and addiction to alcohol (AUD) (Magill et al., 2024).

Therefore, gaining facts about individual access to mental health care services mostly veterans increase appropriate delivery of the services to the largest beneficial treatment.

In the US a study adopted veterans' Health Administration which is the largest integration into health care systems established to offer medical care for mental health services among US military veterans (Perry et al., 2022). In addition, about sixty percent of the military veterans were found legible for veteran health Administration depending on length of services, experience of the Combats, injuries accrued during worse services and level of income (Farmer et al., 2016).

For instance, there are recent legislations passed in response to growing need for mental health care services for veteran populations and these included Commander John Scott Hannon Veterans Comprehensive Improvement Act of 2019 and Veterans Comprehensive prevention, Access to care and Treatment Act of 2020 to increase access to and quality of the Veterans mental and prevention of services (Peters, 2023). More so, legislative Act was designed to address the needs of disadvantaged populations including veterans in residing in the rural areas, women veterans, veterans experiencing homelessness and veterans which are risk of increased suicidal tendencies. Relatedly, the legislation were enacted to increase availability of community care for veterans that are not able to receive timely and appropriate care through existing health care services in the county due to long distance from the facility coupled with unavailability of mental health services (Peters, 2023).

Outpatient veteran health administration (VHA) services were rated as higher quality than community medical care services due to various indicators of quality of care including focused on safety and treatment effectiveness (Farmer et al., 2016). Despite this fact, most veterans are eligible VHA and it was unclear whether veterans were most likely to access VHA services. Also, studies that examined utilization of mental health services had been mixed concerning factors associated with seeking mental health care services.

However, Veterans Health Administration was found active in improving availability of evidenced based treatment for posttraumatic stress disorders and substance abuse (Chard et al., 2012) but most significant numbers of veterans never received mental health care services and among those use mental health care, treatment retention rate remains very low (Finley et al., 2015).

The most commonly used model for predicting utilization of mental health care services and other forms of seeking health care is behavioral model of health care utilization (Andersen, 1995). The behavior model of health care utilization (BMHU) of mental health services are measured using the following indicators such as immutable demographic variables that enables one's ability to make more sense and less predisposed to access mental health care services, enabling and hindering variables to access to mental health services (distance from mental health care Centre, availability of health insurance) and need based variables like symptoms and severity of posttraumatic stress disorders. The behavioral model of health care utilization has evidence of its ability to predict utilization of mental health care across several settings and populations. This was applied in the US military veterans that had served during Operation Enduring Freedom and Operational Iraqi Freedom which revealed that older age an association with mental health care utilization while living far away from VHA Centre's affected utilization of mental health care services (Seal et al., 2011). More so, experienced of posttraumatic stress disorders with other concurrent mental health diagnosis was found associated with utilization of mental health care services based on the BMHU model (Seal et al., 2011).

Behavioral model has significant empirical support but previous studies lacked three primary areas; application of the model that focused on broad samples which is important factor to consider in the utilization of mental health services (Fasoli et al., 2010). Meanwhile, specific elements emerged as significant factors associated with utilization of mental health services among veterans and this differs across studies due to heterogeneity of the samples.

Since the predictors of utilization of mental health services is based on sample characteristics, most studies are more informative with interventions that helps to improve health care utilization for the given population. Thus, it's imperative to assess barriers and facilitators within a sample veteran with posttraumatic stress disorder and hazardous drinking in the utilization of mental health services.

Secondly, most studies apply the behavioral model which rely on administrative data that had missed components of model measuring veterans experience such as stigma, belief and perception about mental health, perception of community and personal resources and self-perception about the need for mental health services (Peter et al., 2023). Majority of researches used cross sectional study design which are quantitative in nature and this cannot predict significant differences that are predictive of or due to mental health care utilization (Peter et al., 2023). Therefore, this study will add literature through identification of factors associated with mental health care utilization among veterans by employing qualitative cross sectional study design.

In addition, another widely used model to understand utilization of mental health care services among veterans was behavioral model of health service utilization (BMHSU) (Andersen, 1995). This enabled establishment of predisposing, enabling and need factor for utilization of mental health care services such as nonminority ethnic racial status (Doran et al., 2017) and trauma or combat exposure linked to higher rates of utilization of mental health among veterans (Elhai et al., 2008).

More so, the enabling factors were unemployment, close proximity to mental health care services facilitated the utilization of mental health services (Elhai et al., 2008) while the need factors included greater severity of posttraumatic stress disorders and depressive symptoms, medical conditions and screening positive for mental illness and substance abuse disorders as well as comorbid psychiatric conditions(Hundt et al., 2014).

CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction

This chapter presents literature in compliance with the research questions of the study. The chapter reviews the contribution of other scholars, similarities, gaps, and how the researcher intents to bridge the identified gaps in the study.

2.1. Influence of Posttraumatic stress symptoms on social anxiety among Veterans

It is evident that PTSD in a major challenge threatening the health of combatants globally. Veterans are susceptible to developing PTSD given their repeated exposure to traumatic events. Majority of the Veterans who present with PTSD are more likely to be diagnosed with obsessive compulsive disorder and social anxiety (Knowles et al., 2019). An estimated 30% of Veterans were diagnosed with both PTSD and Social anxiety (Knowles et al., 2019).

Additionally, Sripada et al., (2017) asserts that PTSD is common among veterans and is highly associated with anxiety disorders. The scholars further lament that there are sub-optimal strategies in place to redress the phenomenon of social anxiety among veterans, and execrate the need for targeted interventions to improve the health impact PSTD has on veterans.

Study assessed the influence of comorbid social anxiety disorders on symptomatology and social function in female military sexual trauma survivors with post-traumatic stress disorders. The study participants agreed that poor emotional regulations, limited positive affect as well as greater negative effect were influenced by posttraumatic stress disorder (Gros et al., 2023). In addition, participant with post-traumatic stress disorders were less likely to involve in a romantic relationship and had increased difficulties in sharing thoughts and feelings with family members and friends (Gros et al., 2023).

Relatedly, a study conducted among 45 veterans revealed high level of social anxiety and agoraphobia symptoms experienced severity of depression (Crowson et al., 1998).

Another study done showed that veterans with posttraumatic stress disorders were likely to experience clinical depression than veterans without posttraumatic stress depression (Hofmann et al., 2003). Baseline and follow up study conducted among US veterans revealed high deployment combat exposure was found associated with depression and history of physical assault, disabling injury and illness and somatic symptoms (Armenta et al., 2018a).

Furthermore, study was conducted to assess social well-being and posttraumatic stress in combat veterans that focused on relations to well-being and character strengths. it was found that social anxiety was accountable for incremental variance in daily well-being such as affecting balance, percentage of pleasant days, positive social activity, self-esteem and gratitude (Kashdan et al., 2006). Qualitative study was conducted to identify elements of lived experience of college student veterans experiencing social anxiety and avoidance. The findings showed that eight to ten percent of combats with posttraumatic stress disorders reported symptoms of social anxiety disorders (7% to 13%) (Trahan et al., 2019).

Another study conducted among female partners of male veterans to investigate social experience from social media group. the study established social withdrawal and dependency on social media for social interaction and support was found associated with posttraumatic stress disorders (Ruiz and Stadtlander, 2015). The assessment of impact of posttraumatic stress disorders was conducted on combat veterans and their families, the symptoms of anxiety and effects of sleep disturbance have negative effect on daily functioning of the combatants (Shearer et al., 2016). in the general population, people with posttraumatic stress disorders have intense, disturbing thoughts and feelings associated with experience of long traumatic events. they relive pain through flashbacks and nightmares, always feel very sad, fear and anger and detached themselves from other people (Kessler et al., 2017).

Several studies conducted in the globe revealed that transitioning veterans encounter unmet mental health needs especially posttraumatic stress disorders and they are prone to potential stressors due to combat exposure and military associated trauma (Müller et al., 2017). For example, 30% of Vietnam,10% of Gulf war,15% Iraq veterans and 11% of those returning Afghanistan struggle with posttraumatic stress disorders. as a result, they lead stressful life events which interfere with social, physical and psychological functioning (Knowles et al., 2019).

2.2. Posttraumatic Stress Disorder

The American Psychiatric Association (APA) diagnostic and Statistical Manual of Mental Disorder (Third edition, DSM-III: APA,1980) formally established the term post-trauma stress disorder (PTSD). Prior to this, various labels were used to explain combat related stress including battle fatigue, shell shock, soldiers' irritable heart, and war neurosis (McKeever & Huff, 2003, Sauer & Bhugra 2001). Early description of PTSD placed a large amount of responsibility on the victims. Persons diagnosed with the disorder were believed to possess inherent flaws that caused them to respond to stressors in pathological manner (Brewin, Andrews & Valentine,2000: Mckeever & Huff 2003, Sauer & Bhugra.2001)

Approximately 69% of adults (51.2% of female and 60.7% of male) in the United States experience at least one traumatic situation at point in their lives (Gary & Lombardo,2003). Like noncombat develop PTSD (creamer & Forbes,2004, Dekel Solomon, Elklit &Ginzburg,2004). Recent research shows 15% to 17% of veterans returning from Iraq in 2004 experienced acute stress or symptoms of trauma (Greene- Short ridge et al, 2007). Among women veterans of the conflict in Iraq and Afghanistan, Veterans Affairs data show that almost 20% have been diagnosed with PTSD (United States Government Accountability Office, 2009).

Additionally, PTSD occurs in approximately 10 % of Gulf war (desert Storm) Veterans National Center for Post-Traumatic Stress Order, 2011) Also, about 30% of Vietnam Veterans develop PTSD (National Center for Post- Traumatic Stress Disorder, 2011). The current study was an investigation of a theoretical model integrating combat veterans. For instance, PTSD may result for such experiences as sexual assault and exposure to national disasters. However, the scope of this dissertation is focused solely on combat related PTSD.

2.3. Relationship between social support and social anxiety among Veterans

Din & Lin (1977) perceive social support as a powerful tool for coping among individuals and promotes a sense of belonging, love, security, self-expression, belonging, sexual satisfaction, and recognition. Cob (1976) alludes social support to include three distinctive domains to include informational that one is loved and cared for, information that one is esteemed and valued which brings out recognition, and information that one belongs to a network of communication and mutual obligation.

Social support is an element that is lacking among veterans and has been linked to adverse psychological outcomes and a predictive factor for PTSD and anxiety (Ketcheson, King and Richardson, 2018). Literature shows that veterans with mental disorders suffer from lack of social support have (Glan et al., 2015: Pavlacic et al., 2023: Gros et al., 2016). When social support was measured at different levels. Veterans with low social support were the majority with only 29% reporting high social support. Those with low social support had high levels of social anxiety and stress disorders. From the literature reviewed, it is evident to conclude that veterans face enormous challenges in maintaining adequate social support networks.

Although veterans receive social support, the level of social support is way very low since combat personnels stay away from their loved families longer which has been proved to impact on their social wellbeing negatively, hence escalating social anxiety.

The other factor found to be a predictor of social support was work demands and deployment (Ketcheson, King and Richardson, 2018). Another avenue found to impact social support was release from military service, and interpersonal conflict. Pavlacic et al., (2023) found social support to influence PTSD among military veterans. The current study will assess factors related to family support networks, remuneration, time taken in military service, and deployment, and the impact of these factors on hyper arousal, avoidance. Intrusion, and negative cognition. Literature scanned shows that there is limited research on social support among veterans, the few studies done have only concentrated in war tone zones in more developed countries leaving out Sub-Saharan Africa, and Africa. This contributes to scanty literature making the phenomenon of social support unknown among veterans.

2.4. Effect of social support on posttraumatic stress disorder and social anxiety

Social support as a mediating factor between PTSD and social anxiety disorder is a field that has not been well researched. The current study will analyze the mediating effect of social support on PTSD and social anxiety by employing structural equation modelling to ascertain the predictive factor for PTSD and social anxiety among military veterans in South Sudan. After which a model will be developed that will be employed by the government and other stakeholders to address the issue of PTSD among veterans hence leading to social wellbeing.

2.5. Influence of integration of mental health services into existing health care on posttraumatic stress disorder and social anxiety among Veterans

Study conducted in the US tested behavioral model of health care utilization among trauma survivors and it was found that there was an association between symptom severity and mental health care utilization mostly depended on the type of symptom (Fleming and Resick, 2017). In addition, depressive symptoms had negative association with mental health care

utilization. In the Military veterans in the US, mental and substance abuse are more prevalent which impairs them but they go without treatment (Fuehrlein et al., 2016).

Evidence based interventions indicates effectiveness of mental health treatment but one third of them did not receive it (Olatunji et al., 2010). To worsen, when veterans eventually engage in services, there always delayed treatment initiation with time of 16 to 2.5 years for pre and post veterans between onset of diagnosis and treatment for posttraumatic stress disorders (Goldberg et al., 2019). Therefore, it's important to engage veterans in treatment in a timely manner and its critical to establish determinants and correlates of mental health care utilization.

CHAPTER THREE: METHODOLOGY

3.0. Introduction

This chapter involved study design, study population, sample size determination, sampling technique sampling procedure, data collection tools, data collection procedure, quality control, data, analysis and presentation ethical consideration, study limitation, dissemination of results.

3.1. Study Design

The study adopted quantitative cross-sectional study design to assess influence of posttraumatic stress disorders on social anxiety among veteran combatants in South Sudan.

Cross sectional study design is useful for public health planning, monitoring and evaluation (Setia, 2016). Cross sectional study design is the type of observational research which involves analysis of information about the population at single point period, it measures prevalence of the outcome of interest and it also provides snapshot of the characteristics of the population at a specified time (Simkus, 2023).

3.2. Study Area/Site

The study was conducted in 10 selected military Infantry division commands (barracks) of South Sudan and these includes 8th Infantry division (Eagle) in Malual chaat- Bor, Jonglei State, 7th infantry Division (Cobra) in Torit, Eastern Equatoria, 3rd Infantry Division (Lion) in Wunyiik, Aweil, Northern Bhar-algazal, 5th infantry Division(Elephant) in Girinti Military base in Wau, Western Bhar-agazal, 6th infantry Division (Crocodile) Maridi, Western Equatoria, 4th infantry Division Command (Petrol) in Bentiu, Unity State, 2nd infantry command in Wunlit, Warrap State, 9th infantry division command in Malou, Lakes State, 1st infantry Division command in Renk, Upper Nile State, Giada, Jamus battalion, Juba, central Equatoria State, Yei bridge 5, and Bipham General HQs

3.3. Study Population

The study included all veteran and combatants of South Sudan and the study shall include respondents due to suicidal ideations and self-harm. The study excluded veteran combatants that had been on previous treatment of posttraumatic stress disorders, current diagnosis of psychotic disorders, substance and alcohol dependence.

3.4. Sources of Data

The sources of this data were veterans' combatants residing in military infantry divisions of the Republic of South Sudan.

3.5. Sample Size Determination

The Sample size was determined using Kish and Leslie formula of 1970 since the prevalence of post-traumatic stress disorders were reported among 40.7% of the respondents had post-traumatic stress disorder in South Sudan (Ng et al., 2017), the population of attribute in the study population will be taken at 95% level of confidence and a 5% margin of error.

$n=Z2pq/e^2$

where n is the required sample size, Z is the constant on the standard normal distribution table (1.96), P is the prevalence of posttraumatic stress disorders among veterans (40.7% or 0.407) and q is the proportion that had not experienced posttraumatic stress disorders. (1-0.407=0.593).

n= (1.96*1.96*0.503*0.407)/ (0.05*0.05)

n=0.92717/0.0025

n=370 respondents required for the study.

S/N	STUDY SITE	STATE	ESTIMATED POPULATION	REQUIRED SAMPLE SIZE FROM EACH SITE
1	5th infantry Division in Girinti, Wau	Western Bhar-algazal-	1300	45
2	8th infantry Division in Malual Chaat, Bor	Jong lei State	1000	35
3	9th infantry Division in Malou	Lakes State	800	29
4	Bilpham/ Head Quarters (veteran affairs, Giada Junubia)	Ministry of Defense	2000	70
5	Bride 5, Yei Baracks	Central Equatoria	600	20
6	7th infantry Division Command, Torit	Eastern Equatoria	900	35
7	Brigade 20, Parieng Town	Ruweng Administrative Area	800	29
8	3rd infantry Division Command, Wunyiik	Northern Bhar-algazal	700	25
9	10th infantry Division Command,Wunlit	Warrap State	700	24
10	6th infantry Division Command, Maridi	Western Equatoria	1300	46
11	1st infantry Division command , Renk	Upper Nile State	700	24
12	4th infantry Division command, Rubkona	Unity State	500	17
	TOTAL		**10,600**	
	Calculated sample size		**370**	**370**

3.6. Sampling Procedure

Simple random sampling was used for selecting the study participants from the four chosen divisions. This type of technique gives opportunity for everyone veterans to enroll in this study.

3.7. Study Variables

The dependent variable was social anxiety measured by the following indicators such as mild, moderate and extreme social anxiety. The posttraumatic stress disorders were measured on the Likert scale (0-4) and these four factors measure indexing disturbances in intrusive thoughts, hyper arousal and negative cognitive and avoidance symptoms. The sample questions included whether the respondents experienced repeated, disturbing and unwanted memories that were stressful? have you ever been bothered by feeling jumpy or easily startled.

According to the diagnostic and statistical manual for mental health disorders (DSM), the criteria for posttraumatic stress disorders included any of the following re-experiencing recurrent thoughts or dreams of traumatic events, avoidance such as avoiding thoughts or feelings associated with traumatic events (Lolk, 2013).

Also, negative thoughts and moods (blaming oneself and others as well as having pessimistic outlook), functional impairment that varies with psychiatric comorbidities, suicidal tendencies, substance abuse, chronic pain, poor physical health and delayed health seeking for treatment associated with long term effects of posttraumatic stress disorders (Lolk, 2013). Meanwhile the influencing factors were social support measured by informational, instrumental, emotional support as well as availability of mental health services, and influence of integration of posttraumatic stress disorders on social anxiety.

3.8. Data collection techniques

The study employed researcher administering technique and the data collection was conducted physically and through phone interview to establish influence of posttraumatic stress disorders on social anxiety of veterans in South Sudan.

3.9. Data collection tools

The major data collection tool for this study was structured quantitative to establish influence of posttraumatic stress disorders on social anxiety of veteran combatants in South Sudan. In addition, structured survey questionnaire was used for capturing quantitative data on experience of posttraumatic stress disorders and social anxiety among the Veteran combatants.

3.10. Quality control measures

Training of research assistants was done to equip them with basics of data collection and purpose of the study, how administer questionnaire to the study respondents without altering its meaning. After the training, 10% of the data collection instruments was pre-tested to establish whether questions designed collects what it purports.

3.11. Data management and analysis plan

The principal investigator cross checked the questionnaire to ensure completeness after administering to every respondent. All fulfilled questionnaires were kept lock and key and used for the purpose of the study. Data entry field were created in Epidata version 3.1 and all questions with response categories were put in checks to eliminate errors during data entry. All records entered were exported to statistical package for social sciences version 26.0 for analysis. The categorical data will be analysed and presented using frequency distribution with corresponding percentages. Chi-square test was used to assess level of association between independent variables and level of social anxiety at 95% level of confidence.

Finally, Binary logistic regression model will be fitted to establish strength of association between categorical independent variables and social anxiety at 95% confidence interval and the results was reported using odds ratio.

Ethical Consideration

The ethical approval was got from the Selinus University of Science and Literature School of Psychology, the researcher obtained approval from the General headquarters of the Ministry of Defense and veteran Affairs, Ministry of Health research and ethic committee and clearance from the commanding officer of the troops in all the divisions to get informed consent of the participants. Thereafter, the purpose of the study was briefly explained to all the participants with the assurance that information given will be treated with utmost confidentiality. Confidentiality of the deployed military personal responses and strict adherence to individual privacy were fully assured. Consequently, those willing to participate were made to complete the questioners administered to them through assistant researchers or clinicians who serves as research confederates in the division hospital and its area of responsibility. After 60minutes the questioners were collected from the participants

CHAPTER FOUR: PRESENTATION OF RESULTS

4.0 Introduction

In this chapter, we present results from a study which assessed combat related posttraumatic stress symptoms, social support and social anxiety: the case of veterans and combats in ministry of defense and veteran affairs South Sudan. Three hundred seventy expected sample size were enrolled in this study, which implies one hundred percent response rate was obtained.

4.1 Demographic Characteristics of Respondents

The demographic characteristics of the respondents revealed that majority 306(82.7%) were male, 121(32.7%) were aged 41 to 50 years, slightly more than half 216(58.4%) were Dinkers, 217(58.6%) grew up from the village/farm, **(see table 1).** In addition, 268(72.4%) were residents of the village,186(50.3%) were found in Bar-el-gazel,274(74.1%) were married, and 175(47.3%) had attained non-formal education. Moreso, it was found that 277(74.9%) of the respondents were earning 50,000 to 99,000 South Sudanese pounds monthly, majority 326(88.1%) were full time employees in the government army and 198(53.5%) had worked less than 30 years as soldiers in the government. **(see table 1)**

Table 1;univariate analysis of demographic characteristics of the respondents

Variable	**Category**	**Frequency**	**Percentage**
Sex	Male	306	82.7
	Female	64	17.3
Age	20-30 years	40	10.8
	31-40 years	93	25.1
	41-50 years	121	32.7
	51-60 years	86	23.2

	61-70 years	30	8.1
Tribe	Dinka	216	58.4
	Nuer	16	4.3
	Bari	18	4.9
	Shulluk	6	1.6
	Other	114	30.8
Area of growth	Farm/village	217	58.6
	Boma	29	7.8
	Payam	34	9.2
	County	39	10.5
	State capital	31	8.4
	City	20	5.4
Classification of Area of growth			
	Village	268	72.4
	Urban	58	15.7
	Suburban	44	11.9
Geographical state	Administrative	18	4.9
	Lake Jonglei and unity states	93	25.1
	Equatorial states	73	19.7
	Bhar-algazel and Warrap states	186	50.3
Relationship status/marital status			
	Single	31	8.4
	Committed relationship	3	0.8
	Cohabiting	3	0.8
	Married	274	74.1

	Separated	13	3.5
	Divorced	8	2.2
	Widowed	38	10.3
Education level	Highschool	157	42.4
	College	26	7.0
	Graduate school	12	3.2
	None	175	47.3
Income level (spss)	50,000-99000	277	74.9
	100,000-150,000	79	21.4
	151000-200,000	11	3.0
	201000-400,000	1	0.3
	>1000,000	2	0.5
Employment status	Employed fulltime	326	88.1
	Employed parttime	18	4.9
	Unemployed/looking for work	24	6.5
	Student	1	0.3
	Retired	1	0.3
Duration in service	Less than 30 years	198	53.5
	More than 30 years	172	46.5
	Total	**370**	**100.0%**

Source primary field data 2024

Table 2;bivariate analysis of demographic characteristics and level of social anxiety

		Social Anxiety				
Variables	**Category**	**Low**	**High**	**Total**	**χ^2**	**p-value**
Sex	Male	118(94.4%)	188(76.7%)	306(82.7%)	**18.056**	**<0.001***
	Female	7(5.6%)	57(23.3%)	64(17.3%)		
Age	20-30 years	14(11.2%)	26(10.6%)	40(10.8%)	10.93	0.027*
	31-40 years	39(31.2%)	54(22%)	93(25.1%)		
	41-50 years	45(36%)	76(31%)	121(32.7%)		
	51-60 years	23(18.4%)	63(25.7%)	86(23.2%)		
	61-70 years	4(3.2%)	26(10.6%)	30(8.1%)		
Tribe	Dinka	91(72.8%)	125(51%)	216(58.4%)	**19.515**	**0.001***
	Nuer	4(3.2%)	12(4.9%)	16(4.3%)		
	Bari	7(5.6%)	11(4.5%)	18(4.9%)		
	Shulluk	2(1.6%)	4(1.6%)	6(1.6%)		
	Other	21(16.8%)	93(38%)	114(30.8%)		
Area of growth	Farm/village	53(42.4%)	164(66.9%)	217(58.6%)	**39.699**	**<0.001***
	Boma	20(16%)	9(3.7%)	29(7.8%)		
	Payam	22(17.6%)	12(4.9%)	34(9.2%)		
	County	12(9.6%)	27(11%)	39(10.5%)		
	State capital	12(9.6%)	19(7.8%)	31(8.4%)		
	City	6(4.8%)	14(5.7%)	20(5.4%)		
Classification of Area of growth						
	Village	91(72.8%)	177(72.2%)	268(72.4%)	**7.954**	**0.019***
	Urban	26(20.8%)	32(13.1%)	58(15.7%)		

	Suburban	8(6.4%)	36(14.7%)	44(11.9%)		
Regional sates	Administrative	5(4%)	13(5.3%)	18(4.9%)	0.981	0.806
Lake Jonglei and unity states		32(25.6%)	61(24.9%)	93(25.1%)		
	Equatorial states	22(17.6%)	51(20.8%)	73(19.7%)		
Bhar-algazel and Warrap states		66(52.8%)	120(49%)	186(50.3%)		
Relationship status						
	Single	18(14.4%)	13(5.3%)	31(8.4%)	**37.502**	**<0.001***
	Committed relationship					
		1(0.8%)	2(0.8%)	3(0.8%)		
	Cohabiting	1(0.8%)	2(0.8%)	3(0.8%)		
	Married	104(83.2%)	170(69.4%)	274(74.1%)		
	Separated	0(0%)	13(5.3%)	13(3.5%)		
	Divorced	0(0%)	8(3.3%)	8(2.2%)		
	Widowed	1(0.8%)	37(15.1%)	38(10.3%)		
Education level	Highschool	41(32.8%)	116(47.3%)	157(42.4%)	14.216	0.003*
	College	15(12%)	11(4.5%)	26(7%)		
	Graduate school	7(5.6%)	5(2%)	12(3.2%)		
	None	62(49.6%)	113(46.1%)	175(47.3%)		
Income level	50,000-99000	93(74.4%)	184(75.1%)	277(74.9%)	15.174	0.004*
	100,000-150,000	21(16.8%)	58(23.7%)	79(21.4%)		
	151000-200,000	8(6.4%)	3(1.2%)	11(3%)		
	201000-400,000	1(0.8%)	0(0%)	1(0.3%)		
	>1000,000	2(1.6%)	0(0%)	2(0.5%)		
Employment status						
	Employed fulltime	114(91.2%)	212(86.5%)	326(88.1%)	5.51	0.239

Employed parttime	2(1.6%)	16(6.5%)	18(4.9%)		
Unemployed/looking for work	9(7.2%)	15(6.1%)	24(6.5%)		
Student	0(0%)	1(0.4%)	1(0.3%)		
Retired	0(0%)	1(0.4%)	1(0.3%)		
Duration in service					
Less than 30 years	75(60%)	123(50.2%)	198(53.5%)	3.193	0.074
More than 30 years	50(40%)	122(49.8%)	172(46.5%)		
Total	**125(100.0%)**	**245(100.0%)**	**370(100.0%)**		

Source primary field data 2024 * statistically significant at P<0.05

The following variables has significant association with level of social anxiety including sex of the respondents (chi=18.056; p<0.001), age (chi=10.93; p=0.027), tribe of the respondents (chi=39.699; p<0.001), Area of growth (chi=39; p<0.001), classification of area of growth (chi=7.954; p=0.019), marital status (chi=37.502, p<0.001), level of education (chi=14.216;p=0.003), average monthly level of income (chi=15.174;p=0.004). **(see table 2)**

4.2 Combat Related Posttraumatic Symptoms and social anxiety

Table 3;combat related posttraumatic symptoms and social anxiety

Variable	**Category**	**Frequency**	**Percentage**	**Mean**	**SD**
Repeated disturbing and unwanted memories that are stressful					
	Not at all	82	22.2	3.57	1.707
	A little bit	49	13.2		
	Moderately	13	3.5		
	Quite a bit	29	7.8		
	Extremely	197	53.2		
Suddenly felt or acted as if something stressful was actually happening					
	Not at all	63	17.0	3.04	1.206

	A little bit	50	13.5		
	Moderately	88	23.8		
	Quite a bit	147	39.7		
	Extremely	22	5.9		
Experienced repeated disturbing dreams of the stressful events					
	Not at all	100	27.0	2.98	1.561
	A little bit	53	14.3		
	Moderately	74	20.0		
	Quite a bit	42	11.4		
	Extremely	101	27.3		
Ever felt upset when something reminded you of the past stressful experience					
	Not at all	77	20.8	3.07	1.407
	A little bit	46	12.4		
	Moderately	97	26.2		
	Quite a bit	74	20.0		
	Extremely	76	20.5		
Have you had strong physical reactions when something reminded you					
	Not at all	103	27.8	3.06	1.589
	A little bit	36	9.7		
	Moderately	78	21.1		
	Quite a bit	43	11.6		
	Extremely	110	29.7		
Have you ever avoided memories, thoughts and feelings related to the stress					
	Not at all	78	21.1	3.19	1.474
	A little bit	33	8.9		

	Moderately	103	27.8		
	Quite a bit	51	13.8		
	Extremely	105	28.4		
Have you ever avoided external reminders of the stressful experience					
	Not at all	78	21.1	3.14	1.488
	A little bit	47	12.7		
	Moderately	95	25.7		
	Quite a bit	45	12.2		
	Extremely	105	28.4		
Had trouble remembering parts of the stressful experience					
	Not at all	96	25.9	3.01	1.502
	A little bit	39	10.5		
	Moderately	86	23.2		
	Quite a bit	62	16.8		
	Extremely	87	23.5		
Had strong negative beliefs about yourself, other people and the world					
	Not at all	108	29.2	2.98	1.566
	A little bit	34	9.2		
	Moderately	83	22.4		
	Quite a bit	47	12.7		
	Extremely	98	26.5		
Blaming yourself or someone else for the stressful experience or what happening					
	Not at all	100	27.0	2.99	1.549
	A little bit	46	12.4		
	Moderately	79	21.4		

	Quite a bit	47	12.7		
	Extremely	98	26.5		
Having strong negative feelings such as fear, horror, anger, guilt and sham					
	Not at all	105	28.4	3.01	1.569
	A little bit	37	10.0		
	Moderately	78	21.1		
	Quite a bit	49	13.2		
	Extremely	100	27.0		
Loss of interest in activities that you used to enjoy					
	Not at all	89	24.1	2.92	1.430
	A little bit	52	14.1		
	Moderately	105	28.4		
	Quite a bit	49	13.2		
	Extremely	75	20.3		
Feeling distant and cut off from other people					
	Not at all	110	29.7	3.02	1.609
	A little bit	35	9.5		
	Moderately	72	19.5		
	Quite a bit	44	11.9		
	Extremely	109	29.5		
Trouble experienced positive feelings					
	Not at all	99	26.8	2.95	1.512
	A little bit	42	11.4		
	Moderately	99	26.8		
	Quite a bit	38	10.3		

	Extremely	92	24.9		
Irritable behaviours, angry outbursts and acting aggressively					
	Not at all	92	24.9	3.10	1.536
	A little bit	36	9.7		
	Moderately	90	24.3		
	Quite a bit	46	12.4		
	Extremely	106	28.6		
Taking too many risks and doing things that could cause you harm					
	Not at all	88	23.8	3.09	1.501
	A little bit	33	8.9		
	Moderately	108	29.2		
	Quite a bit	38	10.3		
	Extremely	103	27.8		
Being super-alert and watchful and on guard					
	Not at all	74	20.0	3.43	1.513
	A little bit	24	6.5		
	Moderately	73	19.7		
	Quite a bit	68	18.4		
	Extremely	131	35.4		
Feeling jumpy, easily startled, having difficulty concentrating and trouble					
	Not at all	105	28.4	3.13	1.635
	A little bit	32	8.6		
	Moderately	67	18.1		
	Quite a bit	41	11.1		
	Extremely	125	33.8		

Total	**370**	**100.0**

Source primary field data 2024

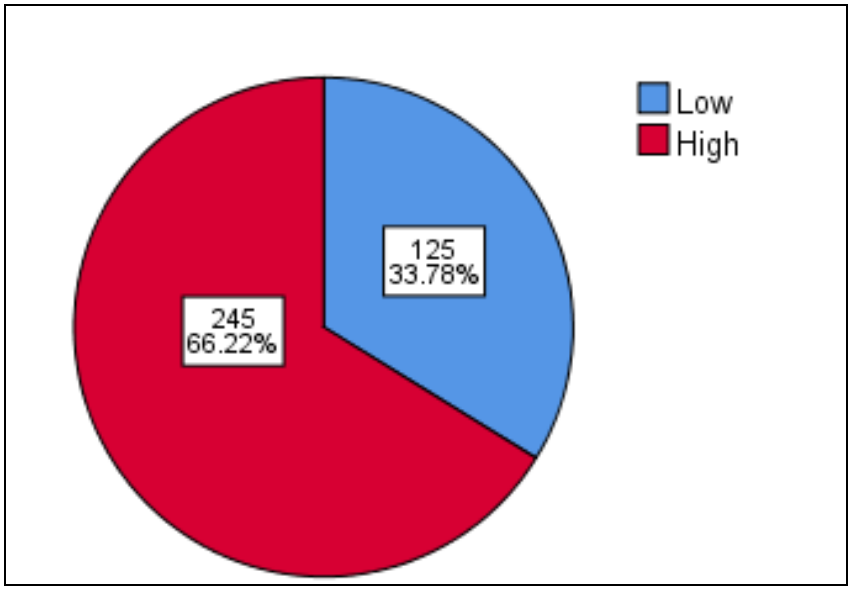


Figure 2;shows overall level of anxiety among combatant

The results in figure showed that more than half 245(66.22%) of the respondents had high level of anxiety as compared to 125(33.78%) with low levels. This is evidenced by the following indicators experienced by the respondents; 179(53.2%) had extreme repeated disturbance and unwanted memories which were stressful, 147(39.7%) acted as if something stressful was actually happening, and 101(27.3%) experienced repeated disturbing dreams of the stressful events. **(see table 3)**

In addition, 76(20.5%) of the respondents ever felt upset when something remined them of the past stressful experience,110(29.7%) experienced strong physical reactions when something reminded them,105(28.4%) avoided memories, thoughts and feelings related to stress, and avoided external reminders of the stressful experience. **(see table 3)**

Furthermore,87(23.5%) of the respondents had trouble remembering parts of the stressful experience, while 98(26.5%) had strong negative beliefs about themselves, other people and the world,98(26.5%) were blaming themselves or others for the stressful experience over

what is happening,100(27.0%) had strong negative feelings like fear, horror, anger, guilt and shame.

Morever, 75(20.3%) of the respondents lost interest in activities that they used to enjoy, 109(29.5%) extremely distant themselves and cut from other people, 92(24.9%) had trouble experiencing positive feelings, and 106(28.6%) had irritable behaviours, angry outbursts and acting aggressively. **(see table 3)**

Relatedly, the study established that 103(27.8%) of the respondents had too many risks and they did things which could cause harm, 131(35.4%) were super alert and watchful and on the guard,125(33.8%) were feeling jumpy, easily startled as well as having difficult concentrating and troubled. **(see table 3)**

4.3 Social Support and social anxiety

The study result showed that 157(42.4%) of the respondent's experienced avoidance as mental health disorder, 36(9.7%) had hyper arousal, 66(17.8%) intrusion while 111(30.0%) experienced negative feelings. In addition, among the social support, the respondents experienced the following informational 289(78.1%), instrumental 208(78.1%), emotional support 244(65.9%), availability of mental health services 6(1.6%) while only 4(1.1%) of the respondents accessed mental health services. **(see table 4)**

Furthermore, 87(23.5%) of the respondents had mental health services in their deployment contentment, 11(3.0%) were accessing frequently,9(2.4%) monthly and 60(16.2%) had access but somehow. In addition, the respondents indicated that ministry of defense offer psychological support for mental health illness,58(15.7%) ha social subscription,37(10.0%) had financial support while 230(62.2%) received other types of support. Also, 14(3.8%) of the respondents agreed that health facility by unit have department for mental health while 310(83.8%) of them disagreed. **(See table 4)**

Regarding the life style of the respondents, 138(37.3%) had ever taken alcohol, 188(50.8%) had ever smoked and they experienced the following due to alcohol intake and inhalation of

drugs; feeling weak and tired 97(26.2%), violence 11(3.0%), feeling sick and vomiting 39(10.5%), remains normal 66(17.8%) and 100(27.0%) never took any drug. **(see table 4)**

Table 4;univariate analysis of social support

Variable	**Category**	**Frequency**	**Percentage**
Experienced following	Avoidance	157	42.4
	Hyper arousal	36	9.7
	Intrusion	66	17.8
	Negative cognitive	111	30.0
Ever received any of the following among combatants and veterans			
Informational	Yes	289	78.1
	No	81	21.9
Instrumental	Yes	208	56.2
	No	162	43.8
Emotional support	Yes	244	65.9
	No	126	34.1
Availability of mental services	Yes	6	1.6
	No	364	98.4
Access to mental health services	Yes	4	1.1
	No	366	98.9
Availability of mental health services in deployment contentment			
	Yes	87	23.5
	No	283	76.5
Frequency of access to mental health services			
	Frequently	11	3.0
	Monthly	9	2.4

	Somehow	60	16.2
	Don't have access	290	78.4
Ministry of defense provide support for mental health illness			
	Psychological	27	7.3
	Psychiatric	2	0.5
	Clinical	16	4.3
	Social subscription	58	15.7
	Financial support	37	10.0
	Others	230	62.2
Health facility managed by unit have department of mental health			
	Available	14	3.8
	Sufficient	3	0.8
	Insufficient	35	9.5
	Adequate services	8	2.2
	Not available	310	83.8
Ever drunk alcohol	Yes	138	37.3
	No	178	48.1
	Somehow	54	14.6
Ever smoked cigarette	Yes	188	50.8
	No	181	48.9
	Somehow	1	0.3
Kind of experience felt when drinking alcohol or inhaling any drugs			
	Good	57	15.4
	Feeling weak and tired	97	26.2

	Violence	11	3.0
	Feeling sick and vomiting	39	10.5
	Remains normal	66	17.8
	Never used drugs	100	27.0
	Total	**370**	**100.0**

Source primary field data 2024

Table 5; social support and level of social anxiety

		Anxiety		Total		
Variable	**Category**	**Low**	**High**		χ^2	**p-value**
Experienced following	Avoidance	78(62.4%)	79(32.2%)	157(42.4%)	56.333	<0.001*
	Hyper arousal	20(16%)	16(6.5%)	36(9.7%)		
	Intrusion	16(12.8%)	50(20.4%)	66(17.8%)		
	Negative cognitive	11(8.8%)	100(40.8%)	111(30%)		
Experience of social life						
Informational	Yes	78(62.4%)	211(86.1%)	289(78.1%)	28.038	<0.001*
	No	46(36.8%)	34(13.9%)	80(21.6%)		
Instrumental	Yes	15(12%)	193(78.8%)	208(56.2%)	149.946	<0.001*
	No	110(88%)	52(21.2%)	162(43.8%)		
Emotional support	Yes	50(40%)	194(79.2%)	244(65.9%)	56.588	<0.001*
	No	75(60%)	51(20.8%)	126(34.1%)		
Availability_of_mental_services	Yes	3(2.4%)	3(1.2%)	6(1.6%)	0.717	0.397
	No	122(97.6%)	242(98.8%)	364(98.4%)		
Access_to_mental_health_services	Yes	1(0.8%)	3(1.2%)	4(1.1%)	0.139	0.709
	No	124(99.2%)	242(98.8%)	366(98.9%)		
Availability of mental health services in deployment contentment						

	Yes	30(24%)	57(23.3%)	87(23.5%)	0.025	0.875
	No	95(76%)	188(76.7%)	283(76.5%)		
Frequency_of_access	Frequently	6(4.8%)	5(2%)	11(3%)	15.831	0.001*
	Monthly	8(6.4%)	1(0.4%)	9(2.4%)		
	Somehow	16(12.8%)	44(18%)	60(16.2%)		
	Don't know	95(76%)	195(79.6%)	290(78.4%)		
Defence ministry having mental health services						
	Psychological	25(20%)	2(0.8%)	27(7.3%)	62.077	<0.001*
	Psychiatric	1(0.8%)	1(0.4%)	2(0.5%)		
	Clinical	3(2.4%)	13(5.3%)	16(4.3%)		
	Social subscription	7(5.6%)	51(20.8%)	58(15.7%)		
	Financial support	19(15.2%)	18(7.3%)	37(10%)		
	Others	70(56%)	160(65.3%)	230(62.2%)		
Availability of mental health services at health centres by unit have mental health services						
	Available	13(10.4%)	1(0.4%)	14(3.8%)	104.187	<0.001*
	Sufficient	3(2.4%)	0(0%)	3(0.8%)		
	Insufficient	31(24.8%)	4(1.6%)	35(9.5%)		
	Adequate services	6(4.8%)	2(0.8%)	8(2.2%)		
	Not available	69(55.2%)	238(97.1%)	307(83%)		
Ever drunk alcohol	Yes	42(33.6%)	89(36.3%)	131(35.4%)	6.698	0.035*
	No	72(57.6%)	113(46.1%)	185(50%)		
	Somehow	11(8.8%)	43(17.6%)	54(14.6%)		
Ever smoked	Yes	39(31.2%)	142(58%)	181(48.9%)	25.053	<0.001*
	No	85(68%)	103(42%)	188(50.8%)		
	Somehow	1(0.8%)	0(0%)	1(0.3%)		

Experience	Good	39(31.2%)	16(6.5%)	55(14.9%)	54.685	<0.001*
	Feeling weak and tired	17(13.6%)	83(33.9%)	100(27%)		
	Violence	4(3.2%)	7(2.9%)	11(3%)		
Feeling sick and vomiting		6(4.8%)	35(14.3%)	41(11.1%)		
	Remains normal	28(22.4%)	41(16.7%)	69(18.6%)		
	Never used drugs	31(24.8%)	63(25.7%)	94(25.4%)		
	Total	**125(100.0%)**	**245(100.0%)**	**370(100.0%)**		

Source primary field data 2024 * statistically significant at P<0.05

The level of social anxiety was found associated with experience of posttraumatic symptoms (chi=56.333; p<0.001), experience of social life [informational (chi=28.038, p<0.001), instrumental (chi-149.946; p<0.001), and emotional support (chi=56.588; p<0.001), frequency of access to mental health services (chi=15.831; p=0.001),ministry of defense offer support for mental health services (chi=62.077;p<0.001), availability of mental health services by unit having mental health services (chi=104.187;p<0.001)]. The life style factors associated with social anxiety included having drunk alcohol (chi=6.698; p=0.035), history of smoking (chi=25.053; p<0.001) and experience after drinking alcohol and smoking (chi=54.685; p<0.001). **(see table 5)**

4.4 Multivariate analysis of factors associated with level of social anxiety among combatants

Table 6;factors associated with level of social anxiety

Variable	P-value	Odds Ratio	95% C.I.for Odds Ratio	
			Lower	Upper
Sex				
Male	**0.032***	**0.329**	**0.119**	**0.908**
Female		1	Reference	
Age (years)	**0.003**			
20-30	0.331	0.483	0.111	2.098
31-40	**0.004***	**0.146**	**0.039**	**0.545**
41-50	**0.031***	**0.248**	**0.070**	**0.879**
51-60		1	Reference	
Tribe	**0.171**			
Dinker	**0.030**	**0.487**	**0.254**	**0.931**
Nuer	0.742	1.262	0.315	5.063
Bari	0.702	0.779	0.217	2.800
Shulluk	0.719	1.509	0.161	14.171
Others		1	Reference	
How would you classify the area in which you grew up				
Farm/village	**0.018***	**0.246**	**0.077**	**0.784**
Boma	**0.033***	**0.276**	**0.085**	**0.899**
Payam	**0.071**	**0.209**	**0.038**	**1.140**
County	0.411	0.536	0.121	2.375
State capital		1	Reference	

Relationship status (marital status)	**0.446**			
Single	**0.045***	**0.094**	**0.009**	**0.949**
Committed relationship	0.595	0.392	0.012	12.396
Cohabiting	0.750	0.561	0.016	19.644
Married	0.057	0.129	0.016	1.064
Separated		1	Reference	
Education level	**0.020**			
High school equivalent	**0.037***	**1.924**	**1.039**	**3.561**
College	0.205	0.506	0.177	1.451
Graduate	0.259	0.434	0.102	1.846
None		1	Reference	
Constant	0.000	617.882		

Statistically significant at P<0.05

According to the result presented in table 6, level of social anxiety varies with sex of the respondents moreso, male respondents had reduced chances of experiencing high level of social anxiety unlike female counterparts (OR=0.329;95%CI:0.119 to0.908; p=0.032). Also, respondents aged 31 to 40 years and those 41 to 50 years had less chances of experiencing high level of social anxiety unlike those 50 years above (OR=0.146;95%CI:0.039 to 0.545; p=0.004) and (OR=0.248;95%CI:0.07 to 0.879) respectively. Relatedly, respondents that were Dinkers had reduced likelihood of high level of social anxiety as compared to those combatants in other tribes (OR=0.487;95%CI:0.254 to 0.931).

Furthermore, the study result showed that place of growth of the respondents had significant relationship with experience of high level of social anxiety, respondents that grew up from village, boma and payam had less chances of high level of social anxiety unlike those who grew up from state capital [(OR=0.246;95%CI:0.077 to 0.784;p=0.018),(OR=0.276;95%CI:0.085 to 0.899;p=0.033) and (OR=0.209;95%CI:0.038 to 1.140;p=0.071)] respectively.

Relatedly, respondents that had single marital status had less chances of experiencing high level of social anxiety unlike those who had separated (OR=0.094;95%CI:0.009 to 0.949; p=0.045). Finally, the study found respondents who had attained high school equivalent level of education were more likely to experience high level of social anxiety unlike those with non-formal education (OR=1.924;95%CI:1.039 to 3.561; p=0.037)

CHAPTER FIVE: DISCUSSION OF RESULTS

5.0 Introduction

In this section, we present discussion of results and compare with findings got from other studies which assessed factors associated with anxiety among combats and veteran.

5.1 Level of anxiety among veterans

According to the study findings, 66.22% of the respondents had high level of anxiety as compared to 33.78% of them with low level of anxiety. This study finding is similar to the results got from United States where about 69% of the veterans (51.2% female vs 60.7% female) had experienced at least one traumatic situation in their live (Gary & Lombardo,2003). However, studies by Creamer & Forbes, and Dekel Solomon, Elklit & Ginzburg, showed that shows 15% to 17% of veterans returning from Iraq in 2004 experienced acute stress or symptoms of trauma (Greene- Short ridge et al, 2007), (creamer & Forbes,2004, Dekel Solomon, Elklit &Ginzburg,2004). The high level of social anxiety among veterans in this study is attributed to low monthly income, having non-formal education, having worked less than 30 years as soldiers in the government. In addition, experience of extreme repeated disturbance and unwanted memories of stressful events, having strong negative beliefs about themselves, other people and the world and blaming themselves or others for the stressful experience over what is happening. Having strong negative feelings like fear, horror, anger, guilt and shame. Moreso, respondents lost interest in activities that they used to enjoy, extremely distant themselves and cut from other people, 92(24.9%) had trouble experiencing positive feelings, and had irritable behaviours, angry outbursts and acting aggressively.

5.2 Demographic factors associated with level of anxiety

The level of social anxiety varies with sex of the respondents, moreso, male respondents (veterans) had had thirty nine percent chances of experiencing high level of anxiety unlike the female counterparts. Relatedly, a study conducted among women veterans of the conflict in Iraq and Afghanistan, Veterans Affairs data showed that almost 20% have been diagnosed with PTSD (United States Government Accountability Office, 2009). Additionally, PTSD occurs in approximately 10 % of Gulf war (desert Storm) Veterans National Center for Post-Traumatic Stress Order, 2011) Also, about 30% of Vietnam Veterans develop PTSD (National Center for Post- Traumatic Stress Disorder, 2011).

Relatedly, age was found risk factor to experience of high level of social anxiety, this is evidence by findings where respondents aged 31 to 40 years and those 41 to 50 years had significantly lower chances of experiencing high level of social anxiety as compared to those 50 years above. The study found respondents who had attained high school equivalent level of education were more likely to experience high level of social anxiety unlike those with non-formal education. This study finding is in line with results from study conducted among US military veterans which found that older age an association with mental health care utilization while living far away from VHA Centre's affected utilization of mental health care services (Seal et al., 2011).

Similarly, the study established higher level of social anxiety among veterans that were dinkers as compared to those combatants in other tribes. Furthermore, the study result showed that place of growth of the respondents had significant relationship with experience of high level of social anxiety, respondents that grew up from village, boma and payam had less chances of high level of social anxiety unlike those who grew up from state capital city.

Relatedly, respondents that had single marital status had less chances of experiencing high level of social anxiety unlike those who had separated.

5.3 Social support factors associated with level of anxiety

The experience of social life of the respondents had significant association with high level of social anxiety; moreso experience of posttraumatic symptoms like informational, instrumental and emotional support. This conquers with findings from US where experienced of posttraumatic stress disorders with other concurrent mental health diagnosis was found associated with utilization of mental health care services based on the BMHU model (Seal et al., 2011). Although veterans receive social support, the level of social support is way very low since combat personals stay away from their loved families longer which has been proved to impact on their social wellbeing negatively, hence escalating social anxiety. The other factor found to be a predictor of social support was work demands and deployment (Ketcheson, King and Richardson, 2018). Another avenue found to impact social support was release from military service, and interpersonal conflict. Pavlacic et al., (2023) found social support to influence PTSD among military veterans. The current study will assess factors related to family support networks, remuneration, time taken in military service, and deployment, and the impact of these factors on hyper arousal, avoidance. Intrusion, and negative cognition.

Literature scanned shows that there is limited research on social support among veterans, the few studies done have only concentrated in war tone zones in more developed countries leaving out Sub-Saharan Africa, and Africa. This contributes to scanty literature making the phenomenon of social support unknown among veterans.

In addition, access to availability and frequency of access to mental health services significantly influenced level of social anxiety among the veterans. The study also found that the ability of the ministry of defense to offer support for mental health services and availability of mental health unit had significant association with level of social anxiety. Social support is an element that is lacking among veterans and has been linked to adverse psychological outcomes and a predictive factor for PTSD and anxiety (Ketcheson, King and

Richardson, 2018). Literature shows that veterans with mental disorders suffer from lack of social support have (Glan et al., 2015: Pavlacic et al., 2023: Gros et al., 2016).

The life styles of the veterans such as smoking and alcohol consumption as well as experience after drinking alcohol were found associated with social anxiety. Study conducted in the US tested behavioral model of health care utilization among trauma survivors and it was found that there was an association between symptom severity and mental health care utilization mostly depended on the type of symptom (Fleming and Resick, 2017). In addition, depressive symptoms had negative association with mental health care utilization. In the Military veterans in the US, mental and substance abuse are more prevalent which impairs them but they go without treatment (Fuehrlein et al., 2016). In addition, depressive symptoms had negative association with mental health care utilization. In the Military veterans in the US, mental and substance abuse are more prevalent which impairs them but they go without treatment (Fuehrlein et al., 2016). To worsen, when veterans eventually engage in services, there always delayed treatment initiation with time of 16 to 2.5 years for pre and post veterans between onset of diagnosis and treatment for posttraumatic stress disorders (Goldberg et al., 2019). Therefore, it's important to engage veterans in treatment in a timely manner and its critical to establish determinants and correlates of mental health care utilization.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This section presents summary of the entire study findings and recommends best ways of improving social anxiety among veterans.

6.1 Conclusion

Three hundred and seventy respondents participated in the study, 82.7% were male, 32.7% aged 41 to 50 years,58.4% were Dinka, and 58.6% grew up from the village,47.3% attained non-formal education and 74.9% were 50,000 to 99,000 South Sudanese pounds monthly, and majority 88.1% were full time employees in the government.

Demographic factors found associated with social anxiety included sex of the respondents mostly male, aged 31 to 40 years and 41 to 50 years, tribes such as being Dinka was found risk to social anxiety, place of growth especially village, Boma and Payam reduced chances of social anxiety, single marital status was found protected to social anxiety, and non-formal education was found risk factor to social anxiety.

Social support factors associated with social anxiety were experience of posttraumatic symptoms (informational, instrumental and emotional support), frequency of access to mental health services, availability of mental health service unit in defense, and life style factors associated with social anxiety included drinking alcohol, history of smoking and experience after drinking alcohol and smoking.

6.2 Recommendations

Based on the above study findings, the following are recommended to improve social life of the veterans; The government of South Sudan need to initiate intervention programs for veterans to depend on after retirements to help them sustain their life. Stanching from the findings of the study, there is a need for certain actions to be taken. since war and armed conflicts can hardly be averted but alleviated rather, these military combatants and veterans should be properly taken care of on combat

ground and after the war. There is a need for trauma debriefing and counselling, on, before and during the combat moments. There should be an active team of mental health experts to always examine and prepare their minds at most times before going on war fronts and after. The social welfare and other provisions of these military combatant should not be played with. There should also periodic mental health examination and checkup for these personnel so as to indicate areas of interest

Furthermore, in the course of the duty and long deployment, the should be granted short breaks or paroles to go home, refresh and gather some social support from family members. Despite the fact that the military has been stretched out in its task over there is a need for it to ensure the welfare of their personnel and one of the way of doing this is to ensure that their personnel are psychologically balanced, this on a long run will promote achievement of the organizational goal.

The researcher recommends the following to the Defense and Veteran Affairs according to the World Health Organization and mental health global Institute Mental Health Department guideline;

i. Improve the working condition of the veteran and provide annual leave for them to refresh and have family support.
ii. Establishment of social subscription centers in the cantonment areas.
iii. Establish a mental health hospital for the rehabilitation of the veterans and combats with posttraumatic disorder and anxiety.
iv. The ministry of health should get a consultant to develop a mental health integral guideline for the military services.
v. Conduct of trauma and psychosocial support training and counselling to the men and women of armed forces.
vi. The government should pay the veterans and combats timely and improve the salary to meet the current inflation in the market to reduce the stress among the combatants and veterans.
vii. The Ministry of Defense should establish a rehabilitation and Integration unit that will facilitate the recovery of the veterans with posttraumatic disorder and anxiety.

6.3. Areas for further studies

6.3.1. Development of an inclusive mental health tool for the ministry of Defense to address mental health needs

6.3.2. Suggested development of social support guideline for retired veterans

6.3.3. Combat related psychosocial training and trauma healing guideline

6.3.4. Study on the impact of the 40 years of civil war on the mental health of combats

6.3.5. Study on mental health service to combat and understanding of the prevalence of mental health among the active men and women in military service.

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Appendix A

Informed consent form

This study is ***"to assess the influence of combat posttraumatic stress symptoms, social support and social anxiety among veterans in the Ministry of Defense and veteran affairs in South Sudan to develop and inclusive model for the improvement of the wellbeing of veterans".***

Dear Participant

The purpose of this research study is to attempt to understand the range "to assess the influence of combat posttraumatic stress symptoms, social support and social anxiety among veterans

The above study is achieved by the following specific objectives;

i. To analyze the influence of Posttraumatic stress symptoms on social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan
ii. To assess the relationship between social support and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan
iii. To evaluate the mediating effect of social support on posttraumatic stress disorder and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan
iv. To assess influence of integration of mental health into existing health care on posttraumatic stress disorder and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan.

We are asking any adult who is at least 18 years of age and is in a military Veteran to complete a survey that contains questions about posttraumatic stress and social anxiety as well as self-perception related to your military/ combat experiences. These terms include general mental situation, personal experiences encountering symptoms of mental illness, combat experience and social support.

Our intent is to use this information to gain a better understanding of the experience of veterans in terms of combat as well as social relationships, mental health and self-beliefs. We estimated the time required to complete the questionnaire survey to be approximately ***one hour.***

This survey is completely anonymous and confidential. In other words, there will be no way to connect your name with your responses. Your right and privacy will be maintained with only the secretary of the research team. The Silenus research internal review board and personal particular to this research have access to the study records.

Participation in this research study is voluntary. You may refuse to participate. you can quit at any time. If you quit or refuse to participate, there will be no consequences. The only risk is that survey questions may evoke distressing memories/ recollections related to your military/ combat experiences. There are no known or anticipated risk in having you participate in this study. To reiterate, you may choose not to participate in this study at any time.

And, although there are no other direct benefits, you may feel satisfaction for contributing to research that may provide new understanding regarding the range of experiences of veterans in terms of combat as well as social relationships, mental health and integration model. Research and future individuals/ veterans may benefit from this information and knowledge.

Signature of participant…… date……

Signature of witness…… date……...

Location…… contact…….

If you have any research related questions or problem, you may contact **Dr. Michael Deng De Monychol Achuil, PhD fellow** on clinical psychology and the author of this project at 0927114118, also the chair of the institutional reviewing board at Selinus University is available at +390932518985 Italy. For additionally, if you are experiencing emotional or psychological problems, you may contact senior psychiatrist Dr. Atong at the ministry of health for counselling and mental health support.

Thank you.

Appendix B

SECTION A: Demographic Questions

Sex:

1. Male
2. Female
3. **Age:**……

Race/Tribe:

1. Dinka
2. Nuer
3. Bari
4. Shulluk
5. Other (please specify:…….

How would you classify the area in which you grew up?

1. farm/ Village
2. Boma under 5,000
3. Payam between 5000 to 10,000
4. County of between 25,000 to 100,000
5. State capital of 100,000 to 500,000
6. City of larger than 500,000

How would you classify the area in which you grew up?

1. Village
2. Urban
3. Suburban

How would you classify the geographical State in which you grew up?

1. Ruweng Administrative Area.
2. Abyei Administrative Area
3. Pibor Administrative Area
4. Lakes State
5. Jonglei State
6. Unity State
7. Central Equatoria State
8. Eastern Equatoria State
9. Upper Nile State
10. Western Equatoria State

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11. Northern Bhar algazal State
12. Western Bhar alghazal State
13. Warrap State

Relationship Status

1. Single
2. Committed Relationship
3. Cohabitating
4. Married
5. Separated
6. Divorced
7. Widowed/ Widower

Education level:

Which level of education did you complete? Mark highest grade completed:

1. Primary school
2. High school equivalent

3. College
4. Graduate school:
5. None

Income level:

1. SSP 20,000 to 50,000
2. SSP 50,000 to 99,000
3. SSP 100000 to 150,000
4. SSP 150,000 to 200,000
5. SSP 200,000 to 400,000
6. SSP 400,000 to 800,000
7. SSP 800,000 to 1,000,000
8. SSP 1000,000 above

Employment Status

1. Deployment/ assignment
2. Employed part time- deployed without assignment
3. Unemployed / looking for work – reserved list
4. Student/ recruit
5. Homemaker
6. Retired

SECTION B: SOCIAL ANXIETY

The table below lists issues/problems people faced in response to extremely stressful experience, keeping your worst even in mind, please and kindly read each question carefully and tick the most appropriate to indicate how much you have been bothered by the following as Combatant and veterans.

The response is on Likert scale 1-5 (1- not at all,2-A little bit,3-moderately,4-Quite a bit and 5-Extremely).

No.	Question	1	2	3	4	5
	Have you experienced the following					
1	Repeated disturbing and unwanted memories that are stressful					
2	Suddenly felt or acted as if something stressful was actually happening (as if you were actually back there reliving it?)					
3	Experienced repeated disturbing dreams of the stressful events					
4	Ever felt upset when something reminded you of the past stressful experience					
5	Have you had strong physical reactions when something reminded you of the stressful (e.g., heart pounding, trouble breathing and sweating)					
6	Have you ever avoided memories, thoughts and feelings related to the stressful experience					
7	Have you ever avoided external reminders of the stressful experience (e.g.; people, places, conversations, activities, objects and situation)					
8	Had trouble remembering parts of the stressful experience?					
9	Had strong negative beliefs about yourself, other people, and the world, (having thoughts such as I am bad, there is something seriously wrong with me, no one can be trusted, 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, and shame?					
12	Loss of interest in activities that you used to enjoy?					

13	Feeling distant and cut off from other people?					
14	Trouble experienced positive feelings e.g. being unable to feel happiness and have loving feelings for people close to you?					
15	Irritable behaviors, angry outbursts and acting aggressively?					
16	Taking too many risks and doing things that could cause you harm?					
17	Being super-alert and watchful and on guard?					
18	Feeling jumpy, easily startled, having difficulty concentrating and trouble falling or staying asleep					

SECTION C: COMBAT-RELATED POSTTRAUMATIC SYMPTOMS

Qn.5. Since you became combatant and veteran, have you ever experienced the following and explain how each impacted on your mental health?

1. Avoidance
2. Hyper arousal
3. Intrusion
4. Negative cognitive

SECTION D: SOCIAL SUPPORT

Qn.6. As a combatant and veteran in the Army of South Sudan, have you ever received the following and elaborate it impact on social life in the community?

1. Informational
2. Instrumental
3. Emotional support
4. Availability mental health services
5. Access to mental health services

Qn.7. Do you know of any available mental health services for combatants in your deployment contentment?

1. Yes
2. No

Qn7a. If yes, how often do you access the service

Frequently.

3. Monthly

4. . Somehow.
5. 4. No sure

Qn.11. Have you ever drunk liquor

1. Yes

Qn 8. Does the Ministry of defense provide support to any one with mental illness? If yes what kind of service to you access

1. Psychological
2. Psychiatrist
3. Clinical
4. Social subscription
5. Financial support
6. Others

Qn.9. In your opinion, does Integration of Mental Health Services into routine health care service in the general hospital improve Mental Health status of the combatants and veterans?

Explain.....

.....

.....

.....

.....

Qn.10. Do the health facilities managed by the unit have department of mental health services and the professional health worker?

1. Available
2. Sufficient
3. Insufficient
4. Adequate service
5. Not available

2. No.

3. Somehow

Qn12. Have you ever smoked cigarette or any other substances in the front line?

1. Yes
2. No
3. Somehow

Qn13. If yes, what kind of experience did you feel when drinking alcohol or inhaling any drugs?

1. Good
2. Feeling weak and tired
3. Violence
4. Feeling sick and vomiting
5. Reminds normal

ESTIMATED BUDGET 2024 IN USD

Serial no.	ITEMS DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL
1	PhD research Cost	Per	1	2500	2500
2	Library stocking	Pcs	30	190	5,700
3	Exposure mission to East Africa, West Africa, Central Africa and North Africa on research mission	Trips	6	1134	6800
4	Research Assistant	Per	10	200	2,000
5	Data Collection Materials	Per	5	100	500
6	Air Ticket to the field	Per	7	300	2100
7	Air Tickets to Rome (Two ways)	Per	2	1250	2,500
8	Printing of the research book	Pc	lump sum	300	300
9	Graduation Gown Optional	Per	1	250	250
10	Accommodation	Nights	30	50	1500
11	Health Insurance	Per	1	300	300
12.	Article publication	Journal	1	300	300
13	Feeding fees	Lump sum	1	1000	10000
	TOTAL				**34750**

WORK PLAN FOR DATA COLLECTION AND THESIS PRESENTATION

	PLANNED ACTIVITIES DESCRIPTION	Locations	TIMEFRAME														RESPONSIBLE PARTY
S/N	*List activity results, Expected output and performance indicators*		*Jan*	*Feb*	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	
1.1	Research Proposal Development	Juba / Kampala															Principal investigator
1.2	Protocols/ Proposal submission	Silenus University , Italy															Principal investigator
1.3	Proposal/ Protecol review	Ministry of Health, Juba & Silenus University, Italy															MOH-RERB & Silenus University
2.0	Travelling to the field	All the 9 locations (Wau, Aweil, Bor, Rumbek, Yei, Nimule, Parieng, Tonj South and Bilpham GHQs)															Principal investigator
2.1	Training of research assistants	All the 9 locations (Wau, Aweil, Bor, Rumbek, Yei, Nimule, Parieng, Tonj South and Bilpham GHQs)															Principal investigator
3.0	Data collection	All the 9 locations (Wau, Aweil, Bor, Rumbek, Yei, Nimule, Parieng, Tonj South and Bilpham GHQs)															Principal investigator
3.1	Data analysis	Kampala, Uganda															Principal investigator
3.2	Research Defense and Approval	Ragusa, Italy															Principal investigator
4.0	Graduation ceremony	Italy, Ragusa															Principal investigator
4.1	Publication on the journal	Online/ Juba															Principal investigator
4.2	Implementation of the model	MOH & MODVA															Principal investigator

MOH-RERB
27 AUG 2024

DATE: 12.08.2024

TO: CHAIRMAN OF MINSTRY OF HEALTH, RESEARCH ETHICS AND REVIEW BOARD (MOH- RERB)

MINISTRY OF HEALTH- JUBA, REPUBLIC OF SOUTH SUDAN

REF: *REQUEST FOR THE REVIEW& APPROVAL OF PhD THESIS PROTOCOL FOR DATA COLLECTION*

DEAR, CHAIRMAN MOH-RERB

Compliment to your esteemed office for the great work and academic contribution towards research ethics and integrity in the country. I would like to present this research protocol for review, this thesis intends to address **"COMBAT RELATED POSTTRAUMATIC STRESS SYMPTOMS, SOCIAL SUPPORT AND SOCIAL ANXIETY: THE CASE OF VETERANS IN MINISTRY OF DEFENSE AND VETERAN AFFAIRS REPUBLIC OF SOUTH SUDAN",** The thesis will solely be for academic purpose and later be implemented to improve the living condition of the combatants and help decision makers address the mental health needs of the men and women in uniform. This project proposal has apparently been approved **by Silenus University of Science and Literature,** Italy- Ragusa with the attached documents, this is the final stage and willingly, the final thesis will be submitted by the end of September and be due by 21st of October prior to graduation in December 2024. Therefore, your review and clearance will aid the data collection process which will be under the Ministry of Defense and Veteran affairs.

Accept the assurance of my office and consideration in supporting the Clinical Psychology Department in the Ministry of Health in the near future.

Lt. Col. Rev. Michael Deng Dc Monychol Achuil, **PhD Fellow in clinical Psychology**
Deputy Head of Partnership and Religious Affairs- **Chaplaincy Corps – SSPDF,**
Ministry of Defense and Veteran Affairs. **Bipham –GHQs.**

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MINISTRY OF HEALTH REPUBLIC OF SOUTH SUDAN

SUBMISSION FORM FOR SOCIAL AND BEHAVIOURAL RESEARCH INVOLVING HUMAN SUBJECTS

PLEASE PRINT OR TYPE

A. BASIC INFORMATION

Applying agency/Institution	**Michael Deng De Monychol Achuil, PhD student.**
Title of Proposal/Project	Combat related Posttraumatic Stress Symptoms, Social support and Social anxiety: the case of Veterans in Ministry of Defense and Veteran Affairs in the Republic of South Sudan
Proposed Start Date	01- August-2024 – 30. September-.2024
Anticipated Duration	2 months

B. PERSONNEL:

i) PRINCIPAL INVESTIGATOR

Name	**Organization**	**Department**	**Full Address**	**Email /Tel/Fax**	**Qualification (Attach CV)**
Michael Deng De Monychol Achuil	consultant	Psychology	Juba- South Sudan	mdengdemonycholol@gmail.com	

ii) COLLABORATOR/S OR OTHER PERSONNEL INVOLVED IN THE STUDY.A South Sudanese National Must (Preferably from Related Government Institution/Directorate or Department) Be One of the Key Investigators or Collaborators in The Study and his/her Qualification/Expertise Determined as Per Public Service Regulations.

Name(s)	**Organization**	**Department/Division**	**Full Address**	**Email /Tel/Fax**	**Role/Task of each collaborator**

C. FUNDING

Is this project Funded?	Yes [ ] No [X] Pending [ ]	
If Yes	Agency/Sponsor	N/A
	Contact Person	

	Email/Tel/Fax	
If No/Pending	Potential Sponsor	
	Contact (Email & Tel/Fax)	
	Submission date	14.08.2024
	Expected funding date	NA

D. OTHER REVIEW BOARD

Is this proposal/protocol subject to review by another Institutional/Human Subject Review Board/Committee	Yes [ ] No [X]
If yes,	Indicate the Name of Board/Committee below. (Attach a copy of approval)

E. PROJECT DESCRIPTION

E1. Give a brief outline of the proposed project/study and attach a proposal with sufficient detail to allow the committee to make an informed decision.	The prevalence of Post-traumatic stress disorders also known as invisible wound among Iraq and Afghanistan combat veterans was approximated 10 to 30% with highest burden reported among those with multiple combat tours (Armenta et al., 2018b). Despite this fact, most combat veterans do not seek medical care frequently due to stigma (Hoge et al., 2014). In addition, by 2020, about 13 million Americans had experienced post-traumatic stress disorders (PTSD) and about five in every 100 adult experienced it every year (Gruessner, 2023). More so, Veterans are more likely to experience PTSD than civilians mostly those deployed to a war zone. Reported by Hoge et al, indicated that interventions and programs should be implemented by military leaders and medical providers to reduce stigma and quitting treatment (Congressional Budget Office, 2012). Early strategies, therapies and individualized treatment models were recommended to improve the care of veterans with post-traumatic stress disorders. A study conducted among combat veterans in US indicated that old age, deployment with high

	combat exposures, enlisted rank, initial post traumatic disorders severity, depression, history of physical assault, disabling injury and somatic symptoms significantly contributed to post traumatic stress disorders (Armenta et al., 2018a). this congers with the systematic review which found that loneliness, experience related to the military service impacted on the social relation isolation of the combatants (Wilson et al., 2018). In South Sudan, post-traumatic stress disorders were reported among 40.7% of the respondents had post-traumatic stress disorder (Ng et al., 2017). However, this study reported post-traumatic stress disorders in the entire population. Respondents with posttraumatic stress disorders endorsed confessions, apologies and amnesty while reported compensation and prosecution were not necessary for reconciliation in South Sudan (Ng et al., 2017). In South Sudan, mental health is important since the majority of the population had been exposed to high rates of violence, displacement and political as well as social insecurity. The post conflict study done in Juba showed that 36% of the sampled population had post-traumatic stress disorders and 50% had depression. Also, another study conducted among Sudanese refugees in northern Uganda revealed that 46% of them had post-traumatic stress disorders while 48% of those who remained in the country had post-traumatic stress disorders. There was high prevalence of mental illness among south Sudanese while there was potential increase in psychiatric diseases in the general population (Ameresekere and Henderson, 2012). There are limited studies that had assessed the posttraumatic stress disorders among combatants in South Sudan while another study conducted among south Sudanese women in the US revealed high level of trauma and trauma associated mental

	disorders especially PTSD (48%), depression (59%), and anxiety 26% (Tutlam et al., 2020). **Main Objectives:** To assess the influence of combatant Posttraumatic stress symptoms, social support, and social anxiety among Veterans in Ministry of Defense and Veteran affairs in South Sudan to develop an inclusive model for the improvement of the wellbeing of Veterans. **Specific Objectives** iv. To analyze the influence of Posttraumatic stress symptoms on social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan v. To assess the relationship between social support and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan vi. To evaluate the mediating effect of social support on posttraumatic stress disorder and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan **Research Questions** v. What is the influence of Posttraumatic stress symptoms on social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan? vi. What is the relationship between social support and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan? vii. What is the mediating effect of social support on posttraumatic stress disorder and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan? viii. what is the influence of integration of mental health into existing health care on posttraumatic stress

	disorder and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan? **Hypothesis** **Ho1:** Posttraumatic stress symptoms have no influence on social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan. **Ho2:** There is no relationship between social support and social anxiety among Veterans in Ministry of Defense and Veterans affairs in South Sudan **Ho3:** There is no mediating effect of social support on posttraumatic stress disorder and social anxiety among Veterans in Ministry of Defense and Veteran affairs in South Sudan **Ho4**: There is not relationship between integration of mental health services into existing health care on posttraumatic stress disorder and social anxiety among Veterans in Ministry of Defense and Veteran affairs in South Sudan
E2. State the location of the study and justification for its selection.	This study will cover (12 locations) 10 states, one administrative area and the Head Quarters namely, Aweil in northern Bhar algazal, Wau in Western Bhar -algazal, Kuacjok in Warrap, Rumbek in Lakes, Yei in Central Equatoria, Nimule & Torit in Eastern Equatoria, Bor in Jonglei, Parieng in Ruweng Administrative area, Malakal Upper Nile State, Rubkona, Unity State and Bilpham General HQs. The study shall include all veteran combatants of South Sudan and the study shall include respondents due to suicidal ideations and self-harm. The study shall exclude veteran combatants that had been on previous treatment of posttraumatic stress disorders, current diagnosis of psychotic disorders, substance and alcohol dependence mostly deployed combatants and in the barracks.
E3. State the justification and importance of the study (If this study or a similar one has been done before, what is the value of	**Problem statement:** In South Sudan, post-traumatic stress disorders were reported among 40.7% of the respondents had post-traumatic stress disorder (Ng et al., 2017). However, this study reported post-traumatic stress disorders in the entire

repeating it).	population. Respondents with posttraumatic stress disorders endorsed confessions, apologies and amnesty while reported compensation and prosecution were not necessary for reconciliation in South Sudan (Ng et al., 2017). In South Sudan, mental health is important since the majority of the population had been exposed to high rates of violence, displacement and political as well as social insecurity. The post conflict study done in Juba showed that 36% of the sampled population had post-traumatic stress disorders and 50% had depression. Also, another study conducted among Sudanese refugees in northern Uganda revealed that 46% of them had post-traumatic stress disorders while 48% of those who remained in the country had post-traumatic stress disorders. There was high prevalence of mental illness among south Sudanese while there was potential increase in psychiatric diseases in the general population (Ameresekere and Henderson, 2012). There are limited studies that had assessed the posttraumatic stress disorders among combatants in South Sudan while another study conducted among south Sudanese women in the US revealed high level of trauma and trauma associated mental disorders especially PTSD (48%), depression (59%), and anxiety 26% (Tutlam et al., 2020). **Justification:** Previous studies reported social anxiety about either among civilians or military population but the two groups were never assessed together. Assessing influence of posttraumatic stress symptoms on social anxiety among combatants gives meaningful insights on the type of interventions to help them cope with the world. Multiple studies have documented population based-war related mental health disorders due to armed conflict, but there are limited studies that have examined mental health disorder symptoms experienced by military/combatants. Thus, seeks to fill this gap to establish influence of posttraumatic stress disorders on

	social anxiety of combatants. The study will establish negative health effects that result from armed conflict among the soldiers and combatant for deeper insights into the types of symptoms and severity. The study will support designing interventions to maintain mental health well-being of the military personnel in the face of severe challenges they encounter.
E4. Specify the number, sex, and age range of participants.	The study will be conducted in the military garrisons and health facilities. The estimated population to be targeted is 10,600 and the required sample size will be 370 participants in which anticipated 40% will be female and 60 % male. The Sample size will be determined using Kish and Leslie formula of 1970 since the prevalence of post-traumatic stress disorders were reported among 40.7% of the respondents had post-traumatic stress disorder in South Sudan (Ng et al., 2017), the population of attribute in the study population will be taken at 95% level of confidence and a 5% margin of error. $n=Z2pq/e^2$ where n is the required sample size, Z is the constant on the standard normal distribution table (1.96), P is the prevalence of posttraumatic stress disorders among veterans (40.7% or 0.407) and q is the proportion that had not experienced posttraumatic stress disorders. (1-0.407=0.593). n= (1.96*1.96*0.503*0.407)/ (0.05*0.05) n=0.92717/0.0025 n=370 respondents required for the study.
E5. Briefly specify the source and method of recruiting study participants/subjects.	A cross sectional study design is the type of observational research which involves analysis of information about the population at single point period, it measures prevalence of the outcome of interest and it also provides snapshot of the characteristics of the population at a specified time (Simkus, 2023). The sources of this data will be got from veterans' combatants residing in military divisions South Sudan**,** the study will adopt qualitative cross sectional study design to assess influence of posttraumatic stress disorders on social

	anxiety among veteran combatants in South Sudan. Cross sectional study design is useful for public health planning, monitoring and evaluation (Setia, 2016).
E6. Briefly mention the research methodology and data collection tools to be used. In case the research is divided into phases, specify the method of each phase?	**Type of Study:** Simple random sampling will be used for selecting the study participants from the four chosen divisions. this type of technique gives opportunity for everyone veterans to enroll in this study **Sampling Procedure**: Simple random sampling will be used for selecting the study participants from the four chosen divisions. this type of technique gives opportunity for everyone veterans to enroll in this study. **Study Variables:** The dependent variable will be social anxiety measured by the following indicators such as mild, moderate and extreme social anxiety. The posttraumatic stress disorders which will be measured on the Likert scale (0-4) and these four factors measure indexing disturbances in intrusive thoughts, hyper arousal and negative cognitive and avoidance symptoms. the sample questions will include whether the respondents experienced repeated, disturbing and unwanted memories that were stressful? have you ever been bothered by feeling jumpy or easily startled. According to the diagnostic and statistical manual for mental health disorders (DSM), the criteria for posttraumatic stress disorders includes any of the following re-experiencing recurrent thoughts or dreams of traumatic events, avoidance such as avoiding thoughts or feelings associated with traumatic events (Lolk, 2013). **Data collection techniques**: The study will employ researcher administering technique since the study will be qualitative in nature. this can be conducted physically and through phone interview to establish influence of posttraumatic stress disorders on social anxiety of veterans in South Sudan. **Data collection tools**: The major data collection tool for this

	study will be key informant interview guide to establish influence of posttraumatic stress disorders on social anxiety of veteran combatants in South Sudan. In addition, structured survey questionnaire will be used for capturing quantitative data on experience of posttraumatic stress disorders and social anxiety among the veteran combatants.
E7. Will this study be published? In case so, state the procedures to be undertaken to publish the study.	An article from this study shall be published in clinical psychology journal after the due approval in line with an academic standard, an application shall be written to reviewing committee and an abstract submitted for review and uploaded content for publication.

F. PARTICIPANTS RISK

F1. Mention the research procedures or activities that may cause discomfort or distress to the study participants/subjects.	Participation in this research study is voluntary. You may refuse to participate. you can quit at any time. If you quit or refuse to participate, there will be no consequences. The only risk is that survey questions may evoke distressing memories/ recollections related to your military/ combat experiences. There are no known or anticipated risk in having you participate in this study. To reiterate, you may choose not to participate in this study at any time.
F2. In case of any discomfort or stress caused by the study procedure, what specific steps will be taken to minimize or monitor the risk?	If any of our participant feel discomfort in the process of the study, we shall allow him or her to quit/withdraw for the exercise thou that will be minimized by understanding the mode and autonomy of the our respondents.
F3. If the research involves vulnerable group such as children >5, pregnant women, prisoners, the mentally ill et explain procedures taken to ensure their safety and care.	**N/A**
F4. If study participants/subjects are physically harmed, will they be compensated? If so, how?	We shall not engage in physical touching of our respondent since it's not a clinical experimental exercise study that requires taking of samples like blood or drug administration

F5. In case of any special or unusual circumstances related to this research that might raise specific concern for the welfare of study participants, describe how these concerns will be addressed.	We are asking any adult who is at least 18 years of age and is in a military Veteran to complete a survey that contains questions about posttraumatic stress and social anxiety as well as self-perception related to your military/ combat experiences. These terms include general mental situation, personal experiences encountering symptoms of mental illness, combat experience and social support. All the respondents shall be free to explain their feeling towards the study and their opinions must be respected.

G. CONFIDENTIALITY

G1. State the degree of confidentiality to be maintained with respect to the data collected and the method of how this will be achieved.	**Data management and analysis plan:** The data management process will be done by keeping the audio recordings obtained during the key informant interviews and this is transcribed before analysis. The qualitative data will be analyzed using thematic content analysis that provides, expands and redefine understanding of the topic that had not been extensively researched (Cassol et al., 2018). Thematic content analysis helps to identify the patterns that emerges from the test and they are grouped into words, concepts and themes and its useful in quantifying the relationship between all the grouped content (Dye, 2021)
G2. If some of the information will not be kept confidential (indicate in the consent procedure), state why this is required by the research.	This research will only be used for study purpose at the initial stage, however, the Ministry of Defense and veteran affairs will adapt the study for improving the condition of combatants.
G3. Will audio, video or photographs be part of the data collection, presentation and publication?	Yes [ ] No [X]
G4. If Yes, how will participants' consent for the publication of these recordings or images be obtained?	**N/A**

H. DATA HANDLING AND DISSEMINATION

H1. What steps will be taken to prevent irresponsible or unauthorized use of data and findings?	**Quality control measures:** Training of research assistants to equip them with basics of data collection and purpose of the study, how administer questionnaire to the study respondents without altering its meaning. After the training, 10% of the data collection instruments will be pre-test to establish whether questions designed collects what it purports.
H2. Describe the measures to be taken to communicate the results of the study-to-study participants, their representatives, MoH, institutions, and other relevant bodies who could use the results of the study to improve the health of the study population.	A copy of the research shall be provided through a presentation to both the department of mental health in the Ministry of Health and Ministry of defense for adaptation and implementation of the suggested model to support the combatants in the military service

I. INFORMED CONSENT

I1. State the manner in which consent will be obtained if applicable and supply copies of the information sheet and consent form (Written consent is required where possible).	a) Written Document [x] b) Orally from Script [x] c) Orally without scrip [ ] d) Not Applicable [ ]
I2. How will the participant informed consent be documented?	a) Signature on written consent document [x] b) Signature on document to be read to the participants [x] c) Signature on written consent document by parents/guardians [x]
I3. In case the research requires a waiver of written consent documentation, explain why?	N/A
I4. If children or individuals below 18 years of age are to participate in the study, how will the consent of parents or guidance be obtained (Describe).	N/A
I5. Will participants be informed about the following aspect of research? a) Voluntary participation	a) Yes [x] No [ ] N/A [ ]

b) Freedom to withdrawal c) Purpose and procedures of research d) Foreseeable risks or discomfort e) Extent to which confidentiality will be maintained f) Expected direct benefits g) Expected indirect benefits h) Expected duration of participant' participation i) Compensation incase research involve risk of injury.	b) Yes [x] No [ ] N/A [ ] c) Yes [x] No [ ] N/A [ ] d) Yes [x] No [ ] N/A [ ] e) Yes [x] No [ ] N/A [ ] f) Yes [x] No [ ] N/A [ ] g) Yes [x] No [ ] N/A [ ] h) Yes [x] No [ ] N/A [ ] i) Yes [x] No [ ] N/A [ ]
I6. Indicate the name of the contact person in case of further enquiry regarding the research.	If you have any research related questions or problem, you may contact **Dr. Michael Deng De Monychol Achuil, PhD fellow** in clinical psychology and the author of this project at 0927114118, also Prof. Salvatore Fava the chair of the institutional reviewing board at Selinus University is available at +390932518985 Italy.
NB. In case the answer to any of the above in I5 is "No", attach an explanation of why the research requires such an alteration of the standard elements of informed consent	

J. ATTACHMENT

J1. Documents that must be attached to this submission form are: a) Official covering letter b) Detailed project proposal/protocol c) Information Sheet d) Consent form e) Research Tools - Questionnaires/Topic guides f) CV of principle investigator Note: Include CVs of all main collaborators Participating in the study as well.	a) Attached [x] Not [ ] b) Attached [x] Not [ ] c) Attached [x] Not [ ] d) Attached [x] Not [ ] e) Attached [x] Not [ ] f) Attached [x] Not [ ]
NB: Project proposal/protocol should include but not limited to Title of the project, background information, study objectives, study design, research methods, study area, inclusion criteria for participants, sample size, sampling method, data collection tools, ethical considerations, criteria for discontinuation of the study).	

d) Consent form	d) Attached [x]	Not [ ]
e) Research Tools - Questionnaires/Topic guides	e) Attached [x]	Not [ ]
f) CV of principle investigator	f) Attached [x]	Not [ ]
Note: Include CVs of all main collaborators Participating in the study as well.		

NB: Project proposal/protocol should include but not limited to Title of the project, background information, study objectives, study design, research methods, study area, inclusion criteria for participants, sample size, sampling method, data collection tools, ethical considerations, criteria for discontinuation of the study).

K. CERTIFICATION OF PRINCIPAL INVESTIGATOR

Note: Incomplete forms will not be processed, and concealment or falsification of any information stated above may result in rejection of the proposed project/study. Any change to an approved research study requires the submission of an amendment to the form.

I certify that I have provided all the information required for this study to be conducted in South Sudan and I agree to comply with the research regulations of the Ministry of Health government of South Sudan (MoH of RSS) for the protection of human subjects involved in this research. I will ensure that the report generated from the study will be submitted to the RERB/MOH-RSS without any difficulty/delay.

K1. Signature of Principle Investigator:	Date: 14/8/2024
K2. Signature of the Research Director-MoH RSS	Date: 27/08/2024

FOR OFFICE USE ONLY

IRB No			
Status of Application	Approved [✓]	Pending [ ]	Rejected [ ]
Comments if any	N/A		
Name of the ethical committee member who reviewed the application	Two Independent Reviewers (Dr Ebun / Dr		
Signature		Date: 27/08/2024	

MOH-RERB
27 AUG 2024
MINISTRY OF HEALTH RESEARCH ETHICS REVIEW BOARD
JUBA - SOUTH SUDAN

MAP OF THE VISITED MILITARY INFANTRY DIVISIONS BY THE PRINCIPAL INVESTIGATOR SPOTTED IN RED.

Disclaimer: *This map is not the final map, as the approval by the Government of South Sudan is pending, it is only use for the study and Humanitarian community to identify their operational location.*

REPUBLIC OF SOUTH SUDAN

Ministry of Health, Research Ethics Review Board (MOH-RERB), Juba.

MOH/RERB/P/51/08/2024- MOH/RERB/A/51/22/08/2024 Date: 27th August, 2024

Principal Investigator: Lt. Col. Rev. Michael Deng De Monychol Achuil, PhD Fellow in Clinical Psychology, Silenus University of Science and Literature, Italy

Research Approval Letter

Project: "Combat Related Posttraumatic Stress Symptoms, Social Support and Social Anxiety: The Case of Veterans in Ministry of Defense and Veteran Affairs, Republic of South Sudan"

Dear Dr. Michael

The Ministry of Health, Research Ethics and Review Board(MOH-RERB), in its regular meeting held on 22/08/2024 reviewed your research protocol and has given a favorable ethical opinion for implementation of the study combat related posttraumatic stress symptoms, social support and social anxiety in Juba, South Sudan.

The approval was based on the quality of your application form, protocol and supporting documents that complied with the conditions and principles established by International and national guidelines for carrying out research involving humans as research participants. This approval shall be valid until 30th December, 2024.

In this regard, you are to commence the implementation of this research. Please note that the annual report and request for renewal should be submitted to MOH-RERB one month before the expiry of the approval time. The progress report should not exceed five pages.

In addition, any serious problem related to implementation of this research protocol should be promptly reported to the MOH-RERB, and any changes to the protocol should not be implemented without the MOH-RERB approval except in instances where such a change is necessary to eliminate or prevent an immediate hazard to the research participants.

However, note that no findings of this research would be published or disseminated without approval from MOH-RERB hereto. I wish you all the best in implementing this research protocol in selected SSPDF facilities in Republic of South Sudan.

Amanya Jacob Kasio Iboyi, MPH-SMU, PhD st'd (NU)

MOH-RERB 27 AUG 2024

#. D/Director Research, M & E, Juba & D/Chairperson, MOH-RERB, Juba

Cc: Ministry of Defense and Veteran Affairs, Juba, Republic of South Sudan

C: Director of Education, Research and Plaining

C: Director for Military Intelligent-SSPDF

C: Director General for Veteran Affairs

Tel: +211920536030 Email: ministryofhealthrerb@gmail.com

REPUBLIC OF SOUTH SUDAN

Ministry of Health, Research Ethics Review Board (MOH-RERB), Juba.

DATE: 26/08/2024

TO: CHIEF OF STAFF

FIRST LIEUTENANT GENERAL SANTINO DENG WOL

GENERAL HEAD QUARTERS- SOUTH SUDAN PEOPLE'S DEFENSE FORCES, BILPHAM-JUBA

SUBJECT: REQUEST FOR AUTHORIZATION AND FACILITATION FOR DR. MICHAEL DENG DE MONYCHOL ACHUIL FOR PhD RESEARCH DATA COLLECTION

DEAR, CHIEF OF STAFF

I SALUTE YOUR RESPECTED OFFICE FOR THE TREMENDOUS SERVICE RENDERED TO THE MEN AND WOMEN IN UNIFROM IN THE MINISTRY OF DEFENSE AND VETERAN AFFAIRS.

THIS LETTER SERVES TO INTRODUCE DR. MICHAEL DENG DE MONYCHOL ACHUIL AS PHD CONDIDATE FINALISED TO CONDUCT A DATA COLLECTION IN ALL THE 10 STATES AND ONE ADMINSTRATIVE AREA ON **COMBAT RELATED POSTTRAUMATIC STRESS SYMPTOMS, SOCIAL SUPPORT AND SOCIAL ANXIETY: THE CASE OF VETERANS IN MINISTRY OF DEFENSE AND VETERAN AFFAIRS IN THE REPUBLIC OF SOUTH SUDAN**

THIS THESIS IS OF A GREAT INTEREST TO THE DEPARTMENT OF MENTAL HEALTH AND PSYCHOLGY IN THE MINTSRY OF HEALTH FOR DECISION MAKING AND INTEGRATION OF MENTAL HEALTH SERVICES IN THE ARMED FORCE AND REHABILITATION PROGRAM FOR EX-COMBATANTS IN VETERAN AFFAIRS DIRECTORIATE.

THE INVISTIGATOR IS DEVELOPING A MODEL FOR THE SUPPORT OF THE COMBATANTS MENTAL HEALTH SERVICE. YOUR FACILITATION TO THE STUDENT WILL EASE THE THES S PROCESS THE TRAVELS AND ACCESSIBILITY, THE PRESENTATION WILL BE DUE BY EARLY OCTOBER 2024 PR OR TO THE GRADUATION IN DECEMBER.

ATTACHED ARE THE CREDENTIAL DOCUMENTS FOR YOUR VERIFICATION AND CLEREANCE FROM THE M NISTRY OF HEALTH RESEARCH ETHIC COMMITTEE, UNIVERSITY APPROVAL

NOTE, ALL THE NFORMATION GATHERED FROM THIS EXERCISE SHALL STRICTLY BE USED FOR THE ACADEMIC PURPOSE AND SUPPORT FOR THE VETERANTS.

ACCEPT MY HIGHEST ASSURANCE AND CONSIDERATION

KIND REGARDS

AMANYA JACOB, MPH-SMU, PhD CAND/NU

D/DIRECTOR RESEARCH/SURVEY & D/CHAIRPERSON, MOH-REB, JUBA/SS

C: FILE.

MINISTRY OF HEALTH, RESEARCH ETHICS REVIEW BOARD
MOH-RERB
26 AUG 2024
JUBA - SOUTH SUDAN

1

Tel: +211920536030 Email: ministryofhealthrerb@gmail.com

REPUBLIC OF SOUTH SUDAN
MINISTRY OF DEFENCE AND VETERAN AFFAIRS
Office of the Undersecretary of Veterans' Affairs

GRSS/MODVA/US-VA/J/1/4/09.03.2024. *Date: 3rd September 2024*

From: Undersecretary for Veterans Affairs

To: Director General for Wounded Heroes
R: All Director General – Veterans Affairs
R: All Commanders for Assembly Areas

Subject: Recommendation of Dr. Michael Deng De Monychol Achuil for PhD Research Data Collection

Reference to the above-mentioned subject, I am hereby requesting from all of you to cooperate with **Dr. Michael Deng De Monychol Achuil** for his **PhD Research Data Collection.**

Request all of you to cooperate with him for smooth work

That is for your information

03 SEP 2024

Hon. Maj GEN. AKECH TONG ALEU.
Undersecretary for Veterans Affairs
Ministry of Defence and Veteran Affairs
Republic of South Sudan
Juba.

Cc: File

04 SEP 2024

0926444030 / 0910100004 / Email: tongaleu1@gmail.com

S/N	STUDY SITE	STATE	ESTIMATED POPULATION	REQUIRED SAMPLE SIZE FROM EACH SITE
1	Giridi- Wau	Western Bhar-algazal- D 5	1300	45
2	Bor - Barracks	Jonglei State	1000	35
3	Rumbek/Rumbek town	Lakes State	800	29
4	Bilpham/ Head Quarters (veteran affairs, Giada Junubia)	Ministry of Defense	2000	70
5	Yei Baracks	Central Equatoria	600	20
6	Nimule & Torit Baracks	Eastern Equatoria	900	31
7	Ruweng - Baracks	Ruweng Administrative Area	800	28
8	Aweil - Barracks	Northern Bhar-algazal	700	25
9	Kuacjok- Barracks	Warrap State	700	24
10	Maridi - Barracks	Western Equatoria	600	21
11	Malakal - Barracks	Upper Nile State	700	24
12	Rubkona - Barracks	Unity State	500	17
	TOTAL		**10,600**	
	Calculated sample size		**370**	**370**

SELINUS UNIVERSITY
OF SCIENCES AND LITERATURE

To whom it may concern,

It is attested that the student:

MICHAEL DENG DE MONYCHOL ACHUIL, resident in JUBA, South Sudan.

Registration number: UNISE2233IT - Date of enrollment: 22nd February 2023

Is enrolled in the faculty of Psychology of Selinus University and he is about to pursue a PhD in Clinical Psychology.

This letter will formalize the process of gathering the necessary information and data for his research thesis through questionnaires and interviews. Since his research work will be his PhD thesis, you are kindly requested to provide the information he needs. We assure you that there will be no misuse of this information and the source of this information will be kept concealed. The student will carry out his research work with constant commitment in order to defend his final doctoral thesis that is about the *Personality disorder in veterans with post-traumatic stress disorder and depression in South Sudan.*

This letter is issued for permitted uses in each country.

Selinus University of Science and Literature

3rd October 2023

Dr. Salvatore Fava

President of Selinus University

SELINUS UNIVERSITY
OF SCIENCES AND LITERATURE

PH.D PROGRAM ACCREDITED BY WORLD CERTIFICATION INSTITUTE
Global Authority on Occupational Certification

Dear Ph.D. student **MICHAEL DENG DE MONYCHOL ACHUIL**

we are pleased to inform you that your proposal to hold a Doctorate By Research (PhD) at Selinus University has been accepted.

We welcome you to Selinus University hoping that you can conduct your research in complete serenity to reach all the goals of your academic research.

The doctoral thesis you have to do must be at least 90/100 pages and must be submitted within two years of registration. As a private university that previous studies of their students and their professional credits for the writing of the thesis is not assigned a minimum time. Within two years you can present the thesis at any time.

The thesis, for reading, should be sent by email with an editable word document. The thesis should contain a Abstract, the index of arguments and must be written in a clear and orderly manner. Disordered and difficult reading is not accepted.

Within 60/90 days, the academic committee of the tutor issues the opinion and if necessary, makes the necessary changes.

Selinus University will issue the doctoral certificate within the first graduation session reachable, provided that the status of the student is in *good standing* with the payment of fees.

From this moment you can start your academic work.

For any information or help in writing please write to: **info@selinusuniversity.it** with subject: final thesis Ph.D.

Mrs. Maria Occhipinti
Academic Secretariat

Certificate

OF ENROLMENT AT
SELINUS UNIVERSITY

N° UNISE2233IT

DATE 22ND FEBRUARY 2023

STUDENT INFORMATION:

Name: **MICHAEL DENG DE MONYCHOL**
Surname: **ACHUIL**
Date of birth: **15/09/1987**
City of birth: **PANRIENG**
Country: **SOUTH SUDAN**

CURRENT ADDRESS:

City: **JUBA**
Postal code:
Street: **JUBA**
Country: **SOUTH SUDAN**
Citizenship: **SOUTH SUDANESE**

STUDY INFORMATION:

Program: **DOCTOR OF PHILOSOPHY**
Faculty of **PSYCHOLOGY**
Major: **CLINICAL PSYCHOLOGY**
Study program: ☐ Bachelor ☐ Master ☒ PhD (Doctor of Philosophy)
☐ by APEL ☒ by Research
Study method: **by research**

TUITION INFORMATION

Last payment date: **02 MARCH 2023**
Payment option: **SINGLE PAYMENT**
Payment modality: **Bank remittance or PayPal**

UNISELINUS EUROPE
Secretariat

UNISELINUS EUROPE

SELINUS UNIVERSITY
OF SCIENCES AND LITERATURE

GLOBAL DISTANCE LEARNING UNIVERSITY

STUDENT IDENTITY CARD

NAME: MICHAEL DENG DE MONYCHOL ACHUIL

ENROLMENT NUMBER: UNISE2233IT

FACULTY: PSYCHOLOGY

PROGRAM: DOCTOR OF PHILOSOPHY IN CLINICAL PSYCHOLOGY

VALID TILL: 22/02/2025

www.selinusuniversity.it

VITA

MICHAEL DENG DE MONYCHOL ACHUIL

Personal professional Objective:

To enhance Health and Research skills on Primary health care, Health Protection, GBV, clinical psychology. Build capabilities and Knowledge to address gapes and needs in an inclusive Evidence Based Research to provide information to decision makers to improve quality of clinical Health & preventive Care Service

Degree/Education	***Institution***	***Country***	***Year of completion***
PhD, Clinical Psychology.	*Selinus University of Science & Literature*	*Ragusa, Italy*	*2023-2025*
Masters of Public Health	*International Health Sciences University (IHSU)*	*Kampala, Uganda*	*2017-2018*
Advance Post graduate certificate , Health financing & Insurance	*International Health Sciences University*	*Kampala, Uganda*	*2017-2018*
Diploma. Mental Health & Psychiatrist overview,	*Alison college, online program*	*London, United Kingdom*	***2021--2022***
Executive Masters in Business Administration	*Pan African Institute*	*Accra, Ghana*	*2023-2024*
Masters of Psychology	*Liverpool John Moors University (UNICAF)*	*Liverpool, United Kingdom*	*2024-2026*
Bachelors of Science in Environmental Health	*Cavendish University*	*Kampala, Uganda*	*2013-2016*
Diploma in Human Resource Management	*Sunshine College*	*Bentiu, Sudan*	*2009-2010*

Academic Research Projects not published

Program/ paper	***Project papers***	***Location***	***Year***
Bachelor Degree research	*Impact of Solid Management in urban city,*	***Juba , South Sudan***	***November,2015***
Masters degree research Paper	*Assessment of health and safety standards compliance among employees in the greater pioneer oil company,*	***Parieng*** *(Toma south) South Sudan-*	***July - 2018***
Diploma in health insurance	*Uptake of health insurance service among the urban dwellers, a case of staff working with government*	*Juba, South Sudan*	*February- 2017*

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Job Experience

Position	*Institution*	*Year*
Chief Executive Office	*Prince IAM International Institute.*	*September, 2024 – Open*
Country Director	*Christian Missionaries initiative (CMI)-*	*March, 2024*
GBV & Protection Consultant,	*Christian Missionaries initiative*	*February, 2024*
National Consultant, HIV integration in Humanitarian Response Analyst.	*United Nations Fund for Population (UNFPA) UN ID, JBA-DF-LS-00221*	*December, 2023*
Consultant on WASH (KAP on hygiene study)- Ajoungthok Refugee settlement.	*African Humanitarian Action (AHA)*	*August, 2023*
Healthcare in Detention in Charge, Bhar Algazal Region	*International Committee of Red Cross(ICRC)*	*January, 2022*
Health Specialist -	*State Ministry of Health, Ruweng. Parieng*	*June, 2019*
Public Health Consultant -	*CARE International, Parieng*	*May, 2019*
Public Health Consultant, Epidemic preparedness.	*African Humanitarian Action*	*August, 2021*
HIV and TB support coordinator	*Ruweng State Ministry of Health, Parieng*	*March 2016*
Consultant on Mental Health & Psychosocial psychologist	*Chaplaincy Corps – South Sudan Peoples Defense Forces, Ministry of Defense & veteran Affairs*	*Nov, 2019 – Open*
Consultant on Civil Society Capacity Development.	*World Vision - International*	*Dec,2010*
Part time. Learning Department	*Sunshine* ***College – Bentiu***	*Nov, 2010*
Capacity Building Officer.	***Mercy Corps International***	*Sept, 2009*

Professional Trainings

Training program	***Agency***	***Year of completion***
Mine risk Awareness Trainer of Trainee	*National Mine Action & UNICEF.*	***2012***
Knowledge Attitude Practice training -	*Humanity inclusion former HANDICAP INTERNATIONAL*	***2013***
Be SAFE,	*UN security Department.*	***2023***
Code of conduct, Welcome to ICRC, Cyber security training	*ICRC,*	***2022***
Pandemic preparedness response on one health approach	*Makerere university*	***2021***
Protection from Sexual Exploitation and Abuse training	***UNFPA***	***2021***
Anti-fraud training-	*UNICEF,*	***2020***
Project management & development training	*Uganda Health Alliance.*	***2014***
Fire and safety training	*Uganda fire department,*	***2014***
Integrity training	*ICRC,*	***2023***
Safe 1&2-	*ICRC*	***2022***
Conflict resolution, Peace building & mediation	*University of Juba.*	***2019***
Inclusion and integrity	*Save the Children International*	***2023***
Social prescription	*World Health Organization*	
COVID-19 emergency response		***2020***
Expanded Program for Immunization management and social mobilization,	*UNICEF*	***2019***
Gender inclusivity in peace mission	*African Union, Kofi Annan international peace keeping training center , Ghana*	***2021***

END