

African Multidisciplinary Journal of Development (AMJD)

Page: 72 - 84

<https://amjd.kiu.ac.ug>

POST-TRAUMATIC STRESS DISORDER (PTSD) AMONG UPDF COMBATANTS IN OPERATIONAL AREAS IN UGANDA: DIRECT AND INDIRECT EFFECT OF SOCIAL SUPPORT VARIABLES AND PRE-EXISTING MENTAL HEALTH CONDITION

¹ E.O. Oladunmoye, ² Twine Colebs, ³ Samod Oluwasegun Adegunle & ⁴ Bukola Fausat Lawal

¹ Department of Applied Psychology, Kampala International University, Uganda -

Email: oladunmoyetomenoch@gmail.com Orcid: <https://orcid.org/0000-0002-2721-2391>

² Department of Applied Psychology, Kampala International University, Uganda.

³ Department of Counselling and Human Development Studies, University of Ibadan, Nigeria-

Email: adegunlesamod@gmail.com

⁴ Department of Counselling and Human Development Studies, University of Ibadan, Nigeria.

Email: lawalbukolaturnitin@gmail.com

Abstract

This study examined the direct and indirect effects of social support and pre-existing mental health conditions on post-traumatic stress disorder (PTSD) among Uganda People's Defence Force (UPDF) combatants deployed in operational areas. This study adopted a correlational design with 214 combatants, assessing PTSD symptoms, family support, organisational support, and pre-existing mental health conditions. Descriptive statistics and correlation analyses were conducted using Jamovi and R, while Path Analysis in R was applied to test hypothesized relationships. Path analysis results indicated that pre-existing mental health conditions had a strong direct effect on PTSD ($\beta = .63, p < .01$). Organisational support showed a modest direct protective effect on PTSD ($\beta = -.23, p < .05$). Family support did not significantly predict PTSD, nor were there significant indirect effects of social support through pre-existing mental health. Model fit indices suggested an acceptable fit of the hypothesized model, supporting the direct influence of pre-existing mental health and organisational support on PTSD. These findings underscore pre-existing mental health as a key predictor of PTSD among UPDF combatants and highlight the protective role of organisational support during deployment. The study suggests that the UPDF should prioritize pre-deployment mental health screening, strengthen institutional support systems, and implement resilience-building programs tailored to operational conditions. Although family support did not show significant effects during deployment, structured communication with families may facilitate post-deployment adjustment.

Keywords: Post-traumatic stress disorder, Pre-existing mental health, Organisational support, Family support, UPDF, Combatants, Path analysis

Introduction

Post-traumatic stress disorder (PTSD) is a debilitating psychiatric condition that develops following exposure to traumatic or life-threatening events such as combat, natural disasters, or serious accidents. It is characterized by intrusive recollections, avoidance of trauma-related cues, negative alterations in cognition and mood, and heightened arousal that persist beyond one month and significantly impair functioning (Okonkwo & Ricciardi, 2024). PTSD may also be defined as a psychological disorder arising from the failure to recover after experiencing or witnessing traumatic

events, leading to distress in personal, social, and occupational domains (Al Jowf et al., 2022). Individuals with PTSD often present with flashbacks, nightmares, hypervigilance, irritability, and difficulties in maintaining relationships (Nair, 2025). Among military personnel, the disorder is particularly severe because of repeated exposure to combat-related trauma, which is associated with chronic hyperarousal, impaired readiness, and reduced reintegration into civilian life (Kravchenko, 2025).

Globally, PTSD prevalence varies across populations. In conflict and post-conflict zones, prevalence has been estimated between 3.6% and 88%, depending on the level of trauma exposure and socio-political context (Marzecki et al., 2025). In Uganda, community-based studies have reported PTSD prevalence of 11.8% in post-conflict northern regions (Wipfli et al., 2023). Among the Uganda People's Defence Force (UPDF), combatants deployed in international peacekeeping missions or counter-insurgency operations show elevated prevalence rates, with one study documenting 16% screening positive for PTSD and 21% for substance use disorders (Baguma et al., 2024). These figures highlight the psychological toll of operational deployments and the urgent need for tailored interventions.

Previous work on UPDF combatants has emphasized combat readiness and resilience as protective factors against PTSD. For instance, combat readiness was found to reduce PTSD risk and alcohol misuse, with substance use mediating the relationship between readiness and PTSD outcomes (Baguma et al., 2024). However, less attention has been given to psychosocial factors such as family and organizational support, or to the role of pre-existing mental health conditions as potential mediators in PTSD development. Understanding these dynamics is important because social support and baseline psychological vulnerabilities are well-documented predictors of PTSD in other military contexts (Scoglio et al., 2023; Janssen, 2024). The present study therefore addresses this gap by examining the direct and indirect effects of social support variables specifically family and organizational support and the mediating role of pre-existing mental health condition in PTSD outcomes among UPDF combatants in operational areas.

Family support, broadly defined, refers to the emotional, informational, and practical assistance provided by family members to help individuals cope with adversity (Kamaryati & Malathum, 2020). Positive family environments that emphasize emotional warmth, acceptance, and supportive behavioural control foster higher self-esteem and better mental health outcomes (Ofodile et al., 2025). In military contexts, it involves maintaining communication, offering reassurance, and assisting in reintegration after deployment. Individuals with high family support often demonstrate greater resilience, lower levels of distress, and better long-term adjustment, whereas those with low family support are at heightened risk of loneliness, maladaptive coping, and psychological disorders (Kan et al., 2022). The number of social contacts, both close and not too close, is related to higher levels of well-being (Akintayo & Osundiran, 2024). Studies among service members suggest that family support can reduce PTSD symptoms and suicidal ideation, although in some cases, friend or peer support has shown stronger protective effects (Blessing et al., 2025). Among UPDF combatants, limited data exist regarding the contribution of family support, despite the potential critical role of families in recovery.

Organizational support is defined as the extent to which individuals perceive that their organization values their contributions and cares about their well-being (Eisenberger et al., 2020). In the military, this includes supportive leadership, unit cohesion, peer trust, and access to organizational resources.

Service members with high organizational support typically report greater morale, higher engagement, and lower PTSD symptoms, while low organizational support is associated with stigmatization, reluctance to seek help, and elevated psychiatric morbidity (Bergman & Rushton, 2023). Having capable and dedicated human resources will not only reduce delays and displacements but also improve organizational performance, mental health and the achievement of both personal objectives and the organization's overarching goals (Akintayo et al., 2024). Studies in other military settings demonstrate that perceived organizational support significantly predicts PTSD outcomes, partly through reducing stigma around mental health service use (Britt et al., 2020). However, research on UPDF combatants is sparse, leaving a gap in understanding how organizational support influences PTSD in Ugandan operational areas.

Pre-existing mental health condition refers to psychological disorders, such as depression, anxiety, or trauma-related symptoms, present before exposure to subsequent traumatic events (Brooks et al., 2025). In military populations, prior psychiatric diagnoses strongly predict the onset and severity of PTSD after deployment (Schultebraucks et al., 2021). Individuals with pre-existing conditions are often more vulnerable to stressors, have reduced resilience, and demonstrate higher rates of chronic PTSD. Conversely, those with lower levels of pre-existing mental health problems tend to cope better with trauma exposure and exhibit fewer PTSD symptoms. Evidence from twin studies further supports the contribution of genetic and environmental predispositions to PTSD vulnerability (Peel et al., 2022). Nevertheless, little is known about how pre-existing mental health conditions operate as mediators between social support and PTSD in the Ugandan military context.

From the foregoing, these findings highlight a critical research gap. While the burden of PTSD among UPDF combatants is well-documented, the interaction of social support variables and pre-existing mental health conditions remains underexplored. By examining these relationships, this study aims to provide evidence to guide targeted interventions that strengthen organizational and family support systems while addressing baseline mental health vulnerabilities. Ultimately, such insights can inform strategies to reduce PTSD prevalence and promote resilience among UPDF combatants deployed in operational areas.

Purpose of the Study

The purpose of this study is to examine the **direct and indirect effects of social support variables (family support and organizational support) and pre-existing mental health condition on post-traumatic stress disorder (PTSD) among Uganda People's Defence Force (UPDF) combatants deployed in operational areas**. Specifically, the study seeks to determine the extent to which family and organizational support directly predict PTSD, whether pre-existing mental health condition mediates the relationship between social support and PTSD, and the overall variance explained in PTSD symptoms among combatants. By addressing these objectives, the study aims to contribute evidence that can inform interventions, policies, and support structures for managing PTSD within the Ugandan military context.

Research Questions

Based on the purpose of the study, the following research questions guided the investigation:

RQ 1: What is the relationship existing between family support, organizational support, Pre-existing Mental Health Condition and post-traumatic stress-disorder among **UPDF combatants in operational areas in Uganda?**

RQ 2: Do family support and organisational support significantly predict PTSD symptoms, controlling for pre-existing mental health among **UPDF combatants in operational areas in Uganda?**

RQ 3: Do family and organisational support predict pre-existing mental health status among **UPDF combatants in operational areas in Uganda?**

RQ 4: Is there an indirect effect of support on PTSD via pre-existing mental health among **UPDF combatants in operational areas in Uganda?**

RQ 5: Does the structural model provide adequate overall fit to the data among **UPDF combatants in operational areas in Uganda?**

Methodology

Research Design

The study adopted a **correlational research design**, employing **path analytical modeling** to examine the direct, indirect, and total effects of social support variables and pre-existing mental health condition on PTSD among UPDF combatants. SEM was chosen because it allows for the simultaneous testing of multiple pathways, mediation effects, and the estimation of explained variance.

Population and Sample

The target population consisted of **Uganda People's Defence Force (UPDF) combatants deployed in operational areas**, including those serving in both domestic counter-insurgency operations and international peace support missions. Using a multi-stage sampling approach, combatants were selected from different operational units. A total of **214 respondents** participated in the study, which aligns with recommendations for SEM sample sizes exceeding 200 cases (Kline, 2023).

Instruments

Four standardized and widely validated instruments were used in this study to assess PTSD, family support, organizational support, and pre-existing mental health condition among UPDF combatants in operational areas.

1. Post-Traumatic Stress Disorder Checklist for DSM-5 (PCL-5).

The PCL-5 is a 20-item self-report questionnaire designed to assess the presence and severity of PTSD symptoms as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013). Items correspond to the four symptom clusters of PTSD: intrusion, avoidance, negative alterations in cognition and mood, and hyperarousal. Respondents rate each symptom on a 5-point Likert scale ranging from 0 (not at all) to 4 (extremely), with total scores ranging from 0 to 80. A cutoff score of 31–33 has been recommended for probable PTSD diagnosis (Pettrich et al., 2025). The PCL-5 has demonstrated excellent psychometric properties, including high internal consistency ($\alpha = .94$) and strong convergent validity with clinician-administered PTSD measures (Morrison et al., 2021). In this study, the PCL-5 was used to capture combat-related PTSD symptoms among UPDF combatants.

2. Multidimensional Scale of Perceived Social Support (MSPSS).

The MSPSS is a 12-item self-report instrument designed to measure perceived social support from three sources: family, friends, and significant others (Zimet et al., 1988). Each item is rated on a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). For this study, the family support subscale (4 items) was adapted to assess the perceived availability and adequacy of emotional and instrumental support from family members of UPDF combatants. Higher scores

indicate stronger perceived family support. The MSPSS has consistently shown high reliability ($\alpha \geq .85$) and good construct validity across diverse cultural settings (Fekih-Romdhane et al., 2023).

3. Perceived Organizational Support Scale (POS).

The POS scale, originally developed by Eisenberger et al. (1986), measures the degree to which employees believe their organization values their contributions and cares about their well-being. The scale has been adapted for various occupational settings, including military populations, where it captures perceptions of leadership support, unit cohesion, and organizational care. Items are rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). In this study, selected items were adapted to reflect the UPDF operational context, focusing on command support, access to organizational resources, and perceived concern for combatants' welfare. Previous studies report strong internal consistency ($\alpha = .90$) and predictive validity for psychological outcomes, including PTSD and job satisfaction (Hallett, 2021).

4. General Health Questionnaire (GHQ-12).

The GHQ-12 is a widely used screening tool for detecting psychological distress and pre-existing mental health conditions (Sánchez-Moreno et al., 2024). It consists of 12 items rated on a 4-point Likert scale assessing symptoms such as sleep problems, concentration difficulties, feelings of strain, and inability to enjoy normal activities. Responses can be scored using the bimodal method (0-0-1-1) or Likert method (0-1-2-3), with higher scores indicating greater psychological distress. The GHQ-12 has been validated in African populations and demonstrates strong psychometric properties, with internal consistency typically ranging between $\alpha = .82$ and $.90$ (Kufe et al., 2024). In this study, the GHQ-12 was used to assess pre-existing mental health conditions among UPDF combatants prior to deployment.

Reliability

All instruments employed in this study have been widely validated in prior research and adapted for use in diverse cultural and occupational settings. Reliability analysis for the current sample indicated acceptable to excellent internal consistency, with Cronbach's alpha coefficients $\geq .70$ for all scales, thereby meeting conventional psychometric standards (Novak, 2025).

Data Collection

Data were collected through structured questionnaires administered in operational bases, with informed consent obtained from all participants. Ethical clearance was granted by the relevant institutional review board, and permission was obtained from the UPDF command structure to access participants.

Data Analysis

Data were analyzed using Jamovi and R software. Descriptive statistics were computed to summarize demographic and psychological characteristics of the participants. Structural equation modeling (SEM) was conducted in R to test the hypothesized relationships among PTSD, pre-existing mental health conditions, and social support variables. Model fit was evaluated using standard indices, including RMSEA, CFI, TLI, and χ^2/df . Direct, indirect, and total effects were estimated, and significance was assessed at $p < .05$. Jamovi and R were also used to verify descriptive statistics, perform correlation analyses, and visualize data distributions, ensuring robustness and reproducibility of the findings.

Results

The present study investigated the relationships between family support, organizational support, mental health, and posttraumatic stress disorder (PTSD). Five research questions guided the analysis, with emphasis on direct, indirect, and total effects as estimated by a path model.

Research Question 1: What is the relationship existing between family support, organizational support, Pre-existing Mental Health Condition and post-traumatic stress-disorder among **UPDF combatants in operational areas in Uganda?**

Table 1: Correlation matrix showing relationship between family support, organizational support and pre-existing mental health condition

Variable	M	SD	1	2	3	4
1. PTSD	30.30	7.73		-.05	-.23**	.63**
2. Family Support	17.31	4.71	-.05		.03	-.07
3. Organisational Support	20.22	8.69	-.23*	.03		-.03
4. Pre-existing Mental Health Condition	15.56	4.95	.63**	-.07	-.03	

Note. $p < .01$ for bolded coefficients (two-tailed). $N = 214$.

Research Question 2: Do family support and organisational support significantly predict PTSD symptoms, controlling for pre-existing mental health?

Table 2: Predictors of PTSD Symptoms

Predictor	b	SE	95% CI	β	z	p
Family support	0.475	0.083	0.312 – 0.638	0.255	5.70	< .001
Organisational support	0.183	0.045	0.094 – 0.271	0.181	4.05	< .001
Family × Organisational support interaction	-0.026	0.003	-0.031 – -0.021	-0.460	-10.34	< .001
Pre-existing mental health	0.954	0.079	0.799 – 1.110	0.537	12.03	< .001

Note. Dependent variable = PTSD symptom score.

Table 2 reveals that despite the poor overall model fit, examination of the individual path coefficients revealed **robust and interpretable direct effects**. Higher family support significantly predicted greater PTSD symptom severity, $b = 0.48$, $SE = 0.08$, $\beta = .26$, $z = 5.70$, $p < .001$. Likewise, organisational support was a positive predictor of PTSD symptoms, $b = 0.18$, $SE = 0.05$, $\beta = .18$, $z = 4.05$, $p < .001$. The interaction between family and organisational support was significant and negative, $b = -0.03$, $SE = 0.003$, $\beta = -.46$, $z = -10.34$, $p < .001$, indicating a **buffering or compensatory effect**: when both sources of support were simultaneously high, the combined protective influence reduced PTSD symptoms relative to what would be expected from their additive effects (fig. 1 below).

Pre-existing mental health condition was the strongest predictor of PTSD, $b = 0.95$, $SE = 0.08$, $\beta = .54$, $z = 12.03$, $p < .001$, demonstrating that individuals with a prior mental health condition were at considerably greater risk for elevated PTSD symptoms. Collectively, these predictors explained a substantial proportion of variance in PTSD scores, $R^2 = .58$, $p < .001$, underscoring the clinical importance of both baseline psychological vulnerability and nuanced patterns of social support.

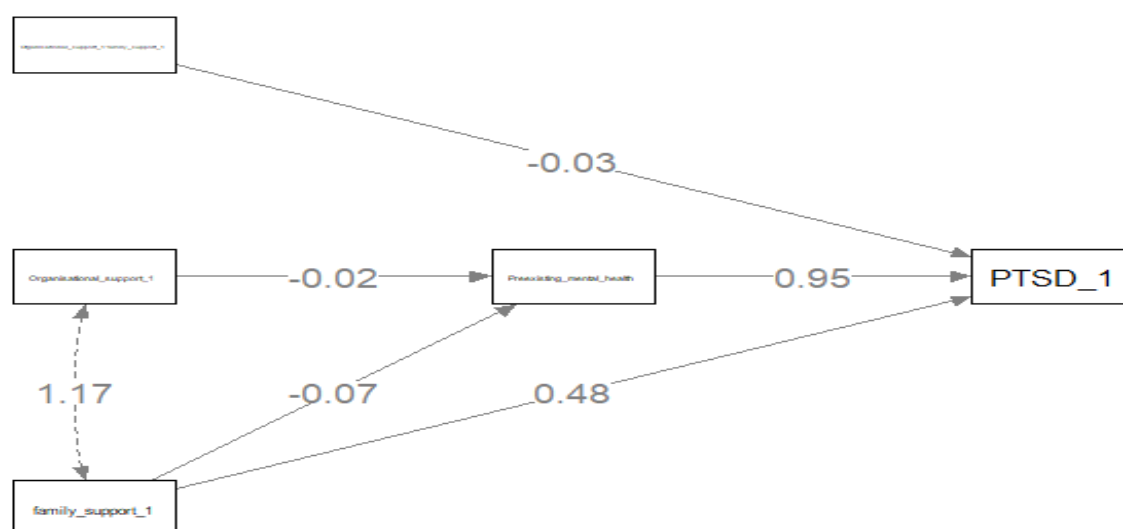


Fig 1: Path Model showing the direct and indirect effect of family and organizational support, pre-existing mental health condition and posttraumatic stress disorder (PTSD)

Research Question 3: Do family and organisational support predict pre-existing mental health status?

Table 3: Predictors of Pre-existing Mental Health

Predictor	b	SE	95% CI	β	z	p
Family support	-0.072	0.072	-0.213 – 0.068	-0.069	-1.01	.315
Organisational support	-0.016	0.039	-0.092 – 0.060	-0.028	-0.41	.683

Table 3 reveals that the regression paths from family support to pre-existing mental health ($b = -0.07$, $SE = 0.07$, $\beta = -.07$, $z = -1.01$, $p = .315$) and from organisational support to pre-existing mental health ($b = -0.02$, $SE = 0.04$, $\beta = -.03$, $z = -0.41$, $p = .683$) were **not statistically significant**. The model accounted for only 0.6 % of the variance in pre-existing mental health ($R^2 = .006$), suggesting that **current perceptions of social support are largely independent of pre-existing mental health condition**. This finding implies that **pre-existing mental health condition** likely reflect earlier life experiences or dispositional factors rather than current family or organisational contexts.

Research Question 4: Is there an indirect effect of support on PTSD via pre-existing mental health?

Table 4: Indirect Effects Through Pre-existing Mental Health

Pathway	Indirect b	SE	95% CI	β	z	p
Family support → Pre-MH → PTSD	-0.069	0.069	-0.203 – 0.066	-0.037	-1.00	.316
Organisational support → Pre-MH → PTSD	-0.015	0.037	-0.088 – 0.058	-0.015	-0.41	.683

Note. Pre-MH = pre-existing mental health conditions

Table 4 reveals that there is no significant indirect effects. The indirect path from family support to PTSD through pre-existing mental health was small and nonsignificant, $b = -0.07$, $SE = 0.07$, $\beta = -.04$, $z = -1.00$, $p = .316$. Similarly, the indirect effect of organisational support via pre-existing mental health was nonsignificant, $b = -0.02$, $SE = 0.04$, $\beta = -.02$, $z = -0.41$, $p = .683$. These results indicate that **pre-existing mental health conditions do not statistically mediate the associations between social support and PTSD symptoms**, reinforcing the primacy of direct effects in this model.

Research Question 5: Does the structural model provide adequate overall fit to the data?

Table 5: Overall Model Fit Statistics ($N = 214$)

Test	χ^2	df	p	RMSEA	90% RMSEA CI	SRMR	CFI	TLI	RNI	GFI	AGFI
User model	721	3	< .001	1.058	0.994 – 1.124	.268	.146	–1.846	.146	.972	.811
Baseline (independ.)	852	10	< .001	–	–	–	–	–	–	–	–

Note. RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual; CFI = comparative fit index; TLI = Tucker-Lewis index; RNI = relative noncentrality index; GFI = goodness-of-fit index; AGFI = adjusted GFI.

Table 5 reveals that the hypothesized structural equation model exhibited **poor global fit** to the observed data. The chi-square test of model fit was significant, $\chi^2(3) = 721$, $p < .001$, indicating that the model's reproduced covariance matrix differed significantly from the empirical covariance matrix. In addition, key fit indices failed to meet conventional criteria (Hu & Bentler, 1999): RMSEA = 1.06, 90% CI [0.99, 1.12], $p < .001$; SRMR = .27; CFI = .15; and TLI = –1.85. Typically, RMSEA values $\leq .06$ and CFI/TLI values $\geq .90$ are considered indicative of acceptable fit. Although the GFI approached an acceptable level (.97), the adjusted GFI (.81) and other indices clearly signal **substantial model misfit**. These results suggest that the specified relationships among family support, organisational support, pre-existing mental health, and PTSD symptoms do not fully capture the underlying data structure.

Discussion of Findings

The first research question explored the relationships among family support, organisational support, pre-existing mental health conditions, and post-traumatic stress disorder (PTSD) among Uganda People's Defence Force (UPDF) combatants. Results showed that pre-existing mental health problems were strongly linked to PTSD symptoms, organisational support offered modest protection, and family support was unrelated. Pre-existing mental health conditions were positively associated with PTSD ($r = .63$, $p < .01$), confirming that prior psychological difficulties heighten vulnerability to trauma (Solomon et al., 2021; Olinover & Hamama, 2025). Organisational support was negatively associated with PTSD ($r = -.23$, $p < .05$), aligning with evidence that institutional backing such as fair leadership and accessible services buffers stress (Rehman et al., 2025). However, Family support showed no significant association with PTSD ($r = -.05$, $p > .05$), diverging from studies highlighting its protective role (Soltani et al., 2015). Extended deployment and separation from family may limit its influence (Joas, 2022).

The result from second research question revealed that both family support ($\beta = .26$, $p < .001$) and organisational support ($\beta = .18$, $p < .001$) were positively associated with PTSD symptoms, while their interaction was strongly negative ($\beta = -.46$, $p < .001$). Pre-existing mental health remained the strongest predictor ($\beta = .54$, $p < .001$). The robust effect of pre-existing mental health aligns with meta-analytic evidence that prior psychopathology is one of the most reliable predictors of PTSD (Georgescu & Nedelcea, 2024). Likewise, longitudinal work shows that baseline anxiety or depression increases risk for post-traumatic reactions (Ismael et al., 2021).

The positive main effects of family and organisational support diverge from the predominant view that support protects against PTSD (Doyle et al., 2023). Similar paradoxical findings, however, have been observed when individuals with severe symptoms actively seek more support, creating a

reverse-causation effect (Arpawong et al., 2022). The significant negative interaction indicates that high levels of *both* family and organisational support jointly buffer PTSD symptoms, a pattern consistent with the stress-buffering model of Cohen and Wills (1985). Comparable synergistic effects have been reported among disaster responders when workplace and home supports are combined (Shammi et al, 2020). Thus, while the main effects appear counterintuitive, the interaction supports established theories that coordinated, multi-source support exerts a protective influence.

The result from the third research question revealed that neither family support ($\beta = -.07, p = .32$) nor organisational support ($\beta = -.03, p = .68$) significantly predicted pre-existing mental health. This suggests that current perceptions of social support are largely independent of historical mental health problems. This null finding is consistent with prospective studies showing that early-life vulnerabilities such as genetic predisposition or childhood adversity are stronger determinants of pre-trauma psychopathology than contemporaneous social support (Minnis et al., 2024). In contrast, some community studies have linked chronic social isolation with poorer lifetime mental health (Allen et al., 2023). The discrepancy may reflect our cross-sectional design and the retrospective assessment of pre-existing conditions, which limits detection of long-term social effects.

The result from the fourth research revealed that indirect paths from family support ($b = -0.07, p = .32$) and organisational support ($b = -0.02, p = .68$) through pre-existing mental health were not significant. Some prior studies have proposed that social support may mitigate PTSD partly by improving general mental health (Platt et al., 2014). Our findings contrast with this view, indicating that pre-existing mental health does not mediate the relationship between support and PTSD in this sample. This divergence could arise from measurement timing pre-existing mental health was assessed retrospectively and from the possibility that support exerts its effects through alternative mediators such as coping style or cognitive appraisal (Che et al., 2018).

The result from the fifth research question showed that the hypothesized structural equation model demonstrated poor fit, $\chi^2(3) = 721, p < .001$; RMSEA = 1.06, 90% CI [0.99, 1.12]; CFI = .15; TLI = -1.85. Accepted benchmarks recommend RMSEA $\leq .06$ and CFI/TLI $\geq .90$ for adequate fit (Sathyanarayana & Mohanasundaram, 2024). Fit indices in structural equation modeling and confirmatory factor analysis: reporting guidelines. (Sathyanarayana & Mohanasundaram, 2024). This lack of fit suggests that the proposed paths did not capture all relevant relationships among family support, organisational support, pre-existing mental health, and PTSD. Similar challenges are reported in trauma research where complex social-psychological variables are modeled. For example, Greenblatt-Kimron & Cohen (2020) note that PTSD models often require additional moderators (e.g., coping style, trauma severity) to achieve acceptable fit. Our findings therefore corroborate the broader literature that PTSD etiology is multifactorial and difficult to capture in a single model. Future research should consider alternative specifications or longitudinal data to improve model accuracy (Rahmadi et al., 2018).

Conclusion

The study Post-Traumatic Stress Disorder (PTSD) among UPDF Combatants in Operational Areas in Uganda: Direct and Indirect Effect of Social Support Variables and Pre-existing Mental Health Condition shows that pre-existing mental health problems exert a strong and direct influence on PTSD symptoms among deployed Uganda People's Defence Force (UPDF) combatants. Organisational support demonstrates a modest protective effect, whereas family support shows no

significant direct or indirect association with PTSD during deployment. These findings underscore that prior psychological vulnerability is a critical determinant of combat-related PTSD and that institutional support within the military is a more salient protective factor than family support in active operational settings.

Recommendations

- 1) Comprehensive mental health screening: Integrate systematic psychological evaluations before and after deployment to identify and support combatants with pre-existing mental health conditions.
- 2) Enhanced organisational support systems: Expand confidential counselling services, strengthen peer-mentorship programs, and provide leadership training that fosters a culture of care and trust within the UPDF.
- 3) Resilience and stress-management training: Offer evidence-based interventions such as resilience workshops and stress-inoculation programs to all soldiers, with tailored modules for those identified as high risk.
- 4) Structured family–military communication: Although family support showed no significant direct or indirect effect during deployment, maintaining scheduled communication and family liaison programs may facilitate reintegration and post-deployment adjustment.
- 5) Continuous post-deployment follow-up: Implement long-term mental health monitoring and accessible treatment pathways to detect and manage PTSD symptoms early in returning personnel.

References

- 1) Akintayo, S. O. & Osundiran, T. E. (2024). Social Status and School Environment as Determinants of Emotional Intelligence among In-School Adolescents in Ibadan North Local Government Area of Oyo State. *International Journal of Science, Engineering and Technology*; 2024, 12(4) [ISSN(Online): 2348-4098 and ISSN(Print): 2395-4752].
- 2) Akintayo, S. O., Dahir, A. H. & Arowobusoye, J. A. (2024). Leadership Styles and Emotional Intelligence as Predictors of Job Commitment among Non-Teaching Staff of the University of Ibadan. *International Journal of Humanities, Social Sciences and Management*. Vol. 4,(5), Oct., 2024, pp: 915-923
- 3) Al Jowf, G. I., Ahmed, Z. T., An, N., Reijnders, R. A., Ambrosino, E., Rutten, B. P., ... & Eijssen, L. M. (2022). A public health perspective of post-traumatic stress disorder. *International journal of environmental research and public health*, 19(11), 6474.
- 4) Allen, S. F., Gilbody, S., Atkin, K., & van der Feltz-Cornelis, C. M. (2023). The associations among childhood trauma, loneliness, mental health symptoms, and indicators of social exclusion in adulthood: A UK Biobank study. *Brain and behavior*, 13(4), e2959.
- 5) American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing.
- 6) Arpawong, T. E., Mekli, K., Lee, J., Phillips, D. F., Gatz, M., & Prescott, C. A. (2022). A longitudinal study shows stress proliferation effects from early childhood adversity and recent stress on risk for depressive symptoms among older adults. *Aging & Mental Health*, 26(4), 870-880.
- 7) Baguma, E. A., Vivalya, B. M. N., Ocen, P. O., & Kasujja, R. (2024). Combat readiness, alcohol abuse, and posttraumatic stress disorder among Uganda peoples' defence forces soldiers. *BMC psychology*, 12(1), 581.

- 8) Bergman, A., & Rushton, C. H. (2023). Overcoming stigma: Asking for and receiving mental health support. *AACN advanced critical care*, 34(1), 67-71.
- 9) Blessing, A., Russell, P., DeBeer, B. B., & Morissette, S. B. (2025). Perceived family support buffers the impact of PTSD-depression symptoms on suicidal ideation in college students. *Psychological reports*, 128(3), 1661-1673.
- 10) Britt, T. W., Wilson, C. A., Sawhney, G., & Black, K. J. (2020). Perceived unit climate of support for mental health as a predictor of stigma, beliefs about treatment, and help-seeking behaviors among military personnel. *Psychological services*, 17(2), 141.
- 11) Brooks, M., Glynn, J., Fawcett, H., Barnes, A., Carew, R., Errickson, D., & Livanou, M. (2025). Trauma in the courtroom: The role of prior trauma exposure and mental health on stress and emotional responses in jurors. *British Journal of Clinical Psychology*, 64(3), 603-622.
- 12) Che, X., Cash, R., Ng, S. K., Fitzgerald, P., & Fitzgibbon, B. M. (2018). A systematic review of the processes underlying the main and the buffering effect of social support on the experience of pain. *The Clinical journal of pain*, 34(11), 1061-1076.
- 13) Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological bulletin*, 98(2), 310.
- 14) Doyle, M., Tapon, K., Karagiannopoulos, V., & Lee, P. (2023). Impacts of organisational role and environmental factors on moral injury and trauma amongst police investigators in Internet Child Abuse Teams. *The Police Journal*, 96(1), 153-171.
- 15) Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied psychology*, 71(3), 500.
- 16) Eisenberger, R., Rhoades Shanock, L., & Wen, X. (2020). Perceived organizational support: Why caring about employees counts. *Annual review of organizational psychology and organizational behavior*, 7(1), 101-124.
- 17) Fekih-Romdhane, F., Fawaz, M., Hallit, R., Sawma, T., Obeid, S., & Hallit, S. (2023). Psychometric properties of an Arabic translation of the multidimensional social support scale (MSPSS) in a community sample of adults. *BMC psychiatry*, 23(1), 432.
- 18) Georgescu, T., & Nedelcea, C. (2024). Pretrauma risk factors and posttraumatic stress disorder symptoms following subsequent exposure: multilevel and univariate meta-analytical approaches. *Clinical Psychology & Psychotherapy*, 31(1), e2912.
- 19) Greenblatt-Kimron, L., & Cohen, M. (2020). The role of cognitive processing in the relationship of posttraumatic stress symptoms and depression among older Holocaust survivors: a moderated-mediation model. *Anxiety, Stress, & Coping*, 33(1), 59-74.
- 20) Hallett, M. M. (2021). *Exploring Existential Spiritual Well-Being and Mindfulness as Mediators in the Mantram Repetition Program for Veterans with Ptsd* (Doctoral dissertation, Alliant International University).
- 21) Ismael, F., Bizario, J. C., Battagin, T., Zaramella, B., Leal, F. E., Torales, J., ... & Castaldelli-Maia, J. M. (2021). Post-infection depressive, anxiety and post-traumatic stress symptoms: A prospective cohort study in patients with mild COVID-19. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 111, 110341.
- 22) Janssen, P. G. J. (2024). *Trauma and its social echoes: Posttraumatic stress disorder and social functioning: Exploring the role of social cognition and emotion regulation in traumatized individuals*. Sl: sn.
- 23) Joas, C. (2022). Deployment Separation Impact on Military Spouse Well-Being.

- 24) Kamaryati, N. P., & Malathum, P. (2020). Family support: A concept analysis. *Pacific Rim International Journal of Nursing Research*, 24(3), 403-411.
- 25) Kan, Z., Søegaard, E. G. I., Siqveland, J., Hussain, A., Hanssen-Bauer, K., Jensen, P., ... & Thapa, S. B. (2022, May). Coping, social support and loneliness during the COVID-19 pandemic and their effect on depression and anxiety: patients' experiences in community mental health centers in Norway. In *Healthcare* (Vol. 10, No. 5, p. 875). MDPI.
- 26) Kline, R. B. (2023). *Principles and practice of structural equation modeling*. Guilford publications.
- 27) Kravchenko, K. (2025). Experience of military psychologists working with service members affected by combat-related psychological trauma. *European Journal of Trauma & Dissociation*, 100537.
- 28) Kufe, C. N., Bernstein, C., & Wilson, K. (2024). Reliability, validity and dimensionality of the 12-Item General Health Questionnaire among South African healthcare workers. *African Journal of Psychological Assessment*, 6, 144.
- 29) Marzecki, F., Ahmadzadeh, Y. I., Jayaweera, K., Rijdsdijk, F., Siribaddana, S., Sumathipala, A., ... & Zavos, H. M. (2025). The aetiology of associations between interpersonal violence, depression and suicidal ideation in Colombo, Sri Lanka: Population-based twin and singleton study. *Journal of Affective Disorders*, 120005.
- 30) Minnis, H., van Harmelen, A. L., Gajwani, R., Rizeq, J., Combet, E., Reynolds, R. M., ... & Shiels, P. G. (2024). The bio-exposome: intracellular processes, stress physiology and the environment. *Nature Mental Health*, 2(2), 132-140.
- 31) Morrison, K., Su, S., Keck, M., & Beidel, D. C. (2021). Psychometric properties of the PCL-5 in a sample of first responders. *Journal of Anxiety Disorders*, 77, 102339.
- 32) Nair, D. S. (2025). Defining PTSD Both Behaviorally and Phenomenologically. In *Development and Treatment of PTSD* (pp. 1-32). IGI Global Scientific Publishing.
- 33) Novak, J. (2025). *A comparison of the appropriateness of various internal consistency coefficients—an alternative to Cronbach's alpha* (Doctoral dissertation, University of Zagreb. Faculty of Humanities and Social Sciences).
- 34) Ofodile, M. C., Akintayo, S. O., Akinyele, O. A., & Ojo, A. O. (2025). Family Environment and Inconsistent Parenting Styles on Adolescents' Self-Esteem among Model School Students of Federal Tertiary Institutions in Ogun State, Nigeria. *International Journal of Research and Innovation in Social Science (IJRISS)*, Vol IX Issue VIII, 622 – 638. DOI: <https://dx.doi.org/10.47772/IJRISS.2025.908000049>.
- 35) Okonkwo, C. V., & Ricciardi, F. M. (2024). MEMORY AND COGNITIVE IMPAIRMENTS FOLLOWING TRAUMA: THERAPEUTIC IMPLICATIONS AND APPROACHES. *Research Journal of Health, Medicine and Nursing*, 12(2), 1-17.
- 36) Olinover, M., & Hamama, L. (2025). Adolescents during wartime: Vulnerability-based profiles. *Journal of Research on Adolescence*, 35(2), e70041.
- 37) Peel, A. J., Purves, K. L., Baldwin, J. R., Breen, G., Coleman, J. R., Pingault, J. B., ... & Eley, T. C. (2022). Genetic and early environmental predictors of adulthood self-reports of trauma. *The British Journal of Psychiatry*, 221(4), 613-620.
- 38) Pettrich, A., Schellong, J., Dyer, A., Ehring, T., Knaevelsrud, C., Krüger-Gottschalk, A., ... & Glaesmer, H. (2025). Beyond one-cutoff-fits-all: determining cutoff values for the PTSD checklist for DSM-5 (PCL-5). *European Journal of Psychotraumatology*, 16(1), 2514878.

- 39) Platt, J., Keyes, K. M., & Koenen, K. C. (2014). Size of the social network versus quality of social support: which is more protective against PTSD?. *Social psychiatry and psychiatric epidemiology*, 49(8), 1279-1286.
- 40) Rahmadi, R., Groot, P., van Rijn, M. H., van den Brand, J. A., Heins, M., Knoop, H., ... & OPTIMISTIC consortium. (2018). Causality on longitudinal data: Stable specification search in constrained structural equation modeling. *Statistical Methods in Medical Research*, 27(12), 3814-3834.
- 41) Rehman, S., Alotaibi, K. A., Rehman, E., Khan, M. N., Rahman, M. A., & Yaqoob, B. (2025). The buffering effects of mindfulness and organizational support on the mental health of hospital pharmacists in high-workload environments. *Scientific Reports*, 15(1), 11994.
- 42) Sánchez-Moreno, E., Corchado-Castillo, A. I., & de la Fuente-Roldán, I. N. (2024). Factor structure and invariance of the 12-item general health questionnaire (GHQ-12) for a sample of people in situations of homelessness. *Journal of Social Distress and Homelessness*, 1-13.
- 43) Sathyanarayana, S., & Mohanasundaram, T. (2024). Fit indices in structural equation modeling and confirmatory factor analysis: reporting guidelines. *Asian Journal of Economics, Business and Accounting*, 24(7), 561-577.
- 44) Schultebraucks, K., Qian, M., Abu-Amara, D., Dean, K., Laska, E., Siegel, C., ... & Marmar, C. R. (2021). Pre-deployment risk factors for PTSD in active-duty personnel deployed to Afghanistan: a machine-learning approach for analyzing multivariate predictors. *Molecular psychiatry*, 26(9), 5011-5022.
- 45) Scoglio, A. A., Molnar, B. E., Lincoln, A. K., Griffith, J., Park, C. L., & Kraus, S. W. (2023). Social support over time for men and women veterans with and without complex trauma histories. *Psychological services*, 20(3), 516.
- 46) Shammi, M., Bodrud-Doza, M., Islam, A. R. M. T., & Rahman, M. M. (2020). Strategic assessment of COVID-19 pandemic in Bangladesh: comparative lockdown scenario analysis, public perception, and management for sustainability. *Environment, development and sustainability*, 23(4), 6148.
- 47) Solomon, Z., Ginzburg, K., Ohry, A., & Mikulincer, M. (2021). Overwhelmed by the news: A longitudinal study of prior trauma, posttraumatic stress disorder trajectories, and news watching during the COVID-19 pandemic. *Social science & medicine*, 278, 113956.
- 48) Soltani, N., Abedian, Z., Mokhber, N., & Esmaily, H. (2015). The association of family support after childbirth with posttraumatic stress disorder in women with preeclampsia. *Iranian Red Crescent Medical Journal*, 17(10), e17865.
- 49) Wipfli, H., Guy, K., Kim, A., Tumuhimbise, P., & Odur, K. (2023). Adolescent mental health in post-conflict communities: results from a cross-sectional survey in Northern Uganda. *Conflict and health*, 17(1), 52.
- 50) Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment*, 52(1), 30-41.