



Posttraumatic Stress Disorder and Work Engagement among Health Workers Involved in COVID-19 Treatment at Jinja Regional Referral Hospital, Uganda

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Abstract: Frontline management of COVID-19 exposed health workers to repeated traumatic events that could undermine their psychological wellbeing and engagement at work. This study examined the extent of posttraumatic stress disorder (PTSD), the level of work engagement, and the relationship between PTSD and work engagement among health workers involved in COVID-19 treatment at Jinja Regional Referral Hospital in Uganda. A convergent mixed-methods cross-sectional design was used. Quantitative data were obtained from 103 health workers using the PTSD Checklist for DSM-5 (PCL-5) and the Utrecht Work Engagement Scale (UWES), while qualitative data were obtained through five key informant interviews with administrative and clinical personnel. Quantitative data were analysed using descriptive statistics and Pearson correlation, while qualitative data were analysed thematically. Probable PTSD was identified among 51.46% ($n = 53$) of health workers. Mean PTSD symptom scores were 1.64 ($SD = 0.95$) for intrusion, 1.53 ($SD = 1.12$) for avoidance, 1.65 ($SD = 0.99$) for negative cognition and mood, and 1.59 ($SD = 0.96$) for arousal/reactivity. Work engagement was moderately high ($M = 4.33$, $SD = 1.05$), with dedication recording the highest mean ($M = 4.68$, $SD = 1.17$). PTSD was significantly and inversely associated with work engagement ($r = -.50$, $p < .001$). Qualitative accounts described recurrent distressing memories, sleep disturbance, fear, emotional strain, moral obligation, teamwork, and professional commitment. The study concludes that substantial trauma-related distress coexisted with sustained professional engagement among frontline health workers. Hospitals and health authorities should integrate psychosocial support, staff wellness, trauma-informed supervision, and routine mental-health monitoring into emergency preparedness and response systems.

Keywords: COVID-19; Health workers; Posttraumatic stress disorder; Work engagement; PCL-5; Uganda

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1. Introduction

The COVID-19 pandemic placed health workers at the centre of an unprecedented public health emergency. Frontline personnel were required to manage severely ill patients while simultaneously facing infection risk, high workloads, uncertainty, repeated exposure to death, and concern for their own families. Such conditions can produce persistent psychological distress and posttraumatic stress symptoms, with consequences for both individual wellbeing and health-system performance.

Posttraumatic stress disorder is a trauma-related condition characterised by intrusion or re-experiencing, avoidance, negative alterations in cognition and mood, and heightened arousal or reactivity. During the COVID-19 pandemic, studies from several settings reported substantial PTSD symptoms among healthcare workers. Bayazit, Ozel, Arac, Dulgeroglu-Bayazit, and Joshi (2022), for example, reported a PTSD level of 39.9% among healthcare workers in Turkey, while (Kabunga & Okalo, 2021) reported a prevalence of 65.7% among frontline nurses in Central Uganda. These findings demonstrate that healthcare workers in epidemic-response

environments may experience clinically important psychological consequences.

Work engagement refers to a positive, fulfilling work-related state characterised by vigour, dedication, and absorption. Vigour reflects energy and persistence, dedication captures a strong sense of significance and commitment, while absorption denotes deep concentration and immersion in work. During public health emergencies, engagement is particularly important because service continuity depends on workers remaining psychologically invested in demanding clinical roles. Yet psychological distress may erode the energy, concentration, and commitment required for sustained engagement.

Evidence from outside Uganda indicates that psychological distress is associated with lower work engagement among healthcare professionals (Gómez - Salgado et al., 2021), while resilience and supportive social environments may help sustain engagement after traumatic events (Nishi et al., 2016). In Uganda, however, limited evidence has examined the direct relationship between PTSD and work engagement among health workers who treated COVID-19 patients, particularly at the regional referral hospital level.

Jinja Regional Referral Hospital served as an important COVID-19 treatment centre in Eastern Uganda. Health workers at the facility operated under stressful conditions during the pandemic, including concerns about contagion, severe patient outcomes, staffing constraints, and the physical burden of prolonged use of personal protective equipment. Understanding how these experiences were associated with both PTSD and work engagement is important for strengthening occupational mental-health systems and future emergency preparedness. This study therefore examined PTSD and work engagement among health workers involved in COVID-19 treatment at Jinja Regional Referral Hospital.

1.1 Objective

The study was to establish the magnitude of the relationship between posttraumatic stress disorder and work engagement among health workers involved in the treatment of COVID-19 patients at Jinja Regional Referral Hospital.

1.2 Specific Objectives

The study was guided by the following three specific objectives:

1. To establish the extent of posttraumatic stress disorder among health workers involved in the treatment of COVID-19 patients at Jinja Regional Referral Hospital.
2. To establish the level of work engagement among health workers involved in the treatment of COVID-19 patients at Jinja Regional Referral Hospital.

3. To establish the relationship between posttraumatic stress disorder and work engagement among health workers involved in the treatment of COVID-19 patients at Jinja Regional Referral Hospital.

2. Literature Review

2.1 Theoretical Review

The study was guided by Social Support Theory, which explains how supportive social relationships can protect individuals from the adverse psychological effects of stress and trauma. In occupational settings, emotional, informational, and instrumental support may strengthen coping, emotional regulation, and resilience. Chouhy, Cullen, and Lee (2020) emphasise the importance of social support in shaping behavioural and wellbeing outcomes.

The theory was relevant because health workers responding to COVID-19 depended on peer relationships, organisational communication, protective resources, and supportive supervision while working in a high-risk environment. In this study, social support was treated as a contextual mechanism that could buffer traumatic stress and help workers sustain vigour, dedication, and absorption despite difficult working conditions.

2.2 Posttraumatic stress disorder among Health Workers

Healthcare workers were exposed to multiple traumatic stressors during the COVID-19 pandemic. Bayazit et al. (2022) found that healthcare workers were at risk of impaired mental wellbeing, with non-physician workers reporting higher PTSD than physicians. In Uganda, Kabunga and Okalo (2021) found PTSD among 65.7% of frontline nurses during the second wave of COVID-19, with low social support, fear of infection, and increased workload emerging as important predictors.

Zhang et al. (2020) similarly, documented PTSD symptoms among healthcare workers after the peak of the COVID-19 outbreak in Wuhan. Across these studies, repeated exposure to severe illness, death, infection risk, uncertainty, and heavy workload emerged as important sources of distress. Further evidence is provided by Andhavarapu et al. (2022), who conducted a systematic review and meta-analysis of 119 studies involving 117,143 healthcare workers. The pooled prevalence of posttraumatic stress symptoms was approximately 34%, demonstrating that PTSD constituted a substantial occupational mental-health burden among healthcare workers during the COVID-19 pandemic. The authors further reported considerable variation in PTSD estimates across studies, suggesting that the psychological impact differed according to healthcare settings, exposure and other contextual factors.

Similarly, Li, Scherer, Felix, and Kuper (2021), in a systematic review and meta-analysis of 65 studies involving 97,333 healthcare workers across 21 countries, reported a pooled prevalence of moderate posttraumatic stress disorder of 21.5%. The findings demonstrated that a substantial proportion of healthcare workers experienced trauma-related psychological symptoms during the COVID-19 pandemic, although prevalence varied across countries and healthcare settings.

A further systematic review and meta-analysis of healthcare workers during the COVID-19 pandemic reported a pooled PTSD prevalence of approximately 49%, alongside substantial levels of anxiety, depression and psychological distress (Saragih et al., 2021). The findings demonstrate that the psychological consequences of COVID-19 among healthcare workers extended beyond PTSD and affected several dimensions of mental health. The relatively high pooled PTSD estimate also illustrates the considerable variation in prevalence reported across studies and settings during the pandemic.

Consistent evidence was reported by d'Ettorre et al. (2021) in a systematic review of 16 studies examining post-traumatic stress symptoms among healthcare workers during the COVID-19 pandemic. The review identified several occupational and individual predictors of post-traumatic stress symptoms, including heavy workload, working in unsafe settings, inadequate training, limited social support, younger age, female gender, and limited work experience. These findings demonstrate that trauma-related symptoms among healthcare workers were influenced not only by exposure to COVID-19 patients but also by the organisational and psychosocial conditions under which healthcare workers performed their duties.

Further evidence from a large systematic review and meta-analysis by Aymerich et al. (2022), involving 239 studies and 271,319 healthcare workers, showed that approximately 32% experienced post-traumatic symptoms during the COVID-19 pandemic. The review also documented considerable levels of depression, anxiety, acute stress, insomnia and burnout, demonstrating that the psychological impact of COVID-19 on healthcare workers extended across multiple mental-health domains. These findings reinforce evidence that trauma-related symptoms constituted an important occupational mental-health problem among healthcare workers exposed to COVID-19.

Ghahramani, Kasraei, Hayati, Tabrizi, and Marzaleh (2023) similarly demonstrated a substantial psychological burden among healthcare workers during the COVID-19 pandemic. Their systematic review and meta-analysis reported a pooled PTSD prevalence of approximately 37%, alongside pooled estimates of 36% for depression, 47% for anxiety, 49% for insomnia, and 27% for stress. The findings further demonstrated that healthcare workers experienced multiple overlapping psychological problems

during the pandemic and reinforced evidence of considerable variation in PTSD prevalence across studies and healthcare settings.

De Kock et al. (2021), in a systematic review of 44 studies across 15 countries, reported PTSD prevalence ranging from 7.4% to 37.4% among healthcare workers during the COVID-19 pandemic. Direct exposure to patients with COVID-19 was the most frequently identified risk factor for adverse mental-health outcomes. Nurses, frontline healthcare workers, those with limited social support, and healthcare workers with fewer years of experience also tended to experience poorer psychological outcomes. These findings demonstrate that both direct occupational exposure and individual and organisational factors contributed to the psychological burden experienced by healthcare workers during the pandemic.

However, the magnitude and expression of PTSD may differ by health-system context, cadre, organisational support, and cultural setting. This justified examining health workers in a Ugandan regional referral hospital.

2.3 Work Engagement among Health Workers

Work engagement is commonly operationalised through vigour, dedication, and absorption. Engaged health workers invest physical, cognitive, and emotional resources in their work, remain persistent under pressure, and attach meaning to their professional responsibilities. During emergencies, engagement supports continuity of care, teamwork, and organisational functioning.

Research during the COVID-19 period suggests that work engagement can persist even in highly stressful conditions. Gómez - Salgado et al. (2021) observed that psychological distress was common among healthcare professionals and was linked to lower work engagement. Ojo, Fawehinmi, and Yusliza (2021) further highlighted resilience as an important predictor of work engagement during the pandemic.

Gómez-Salgado et al. (2021) examined work engagement among 1,459 healthcare professionals during the COVID-19 pandemic using the Utrecht Work Engagement Scale (UWES). The study found that healthcare professionals experiencing psychological distress had significantly lower levels of work engagement. This suggests that adverse psychological experiences during public health emergencies may compromise the energy, dedication and psychological involvement that healthcare workers invest in their professional roles.

Liu et al. (2021) demonstrated that the COVID-19 crisis could negatively influence work engagement among frontline health workers, particularly when employees perceived limited meaningfulness in their work. However, interventions that strengthened work meaningfulness helped mitigate the negative effects of the crisis and improve engagement. This suggests that healthcare

workers' engagement during public health emergencies is influenced not only by occupational demands but also by the meaning and value they attach to their professional responsibilities.

Evidence also indicates that personal and organisational resources can sustain work engagement during pandemic conditions. Zhang et al. (2021) found that organisational identification and psychological resilience were positively associated with work engagement among frontline nurses involved in COVID-19 prevention and control. Psychological resilience also partially mediated the relationship between organisational identity and work engagement, suggesting that both individual coping resources and attachment to the organisation may help healthcare workers remain engaged under demanding conditions.

These findings suggest that engagement is influenced by both psychological burden and protective personal or organisational resources.

2.4 Relationship between PTSD and Work Engagement

Traumatic stress may reduce work engagement by disrupting concentration, energy, emotional regulation, and willingness to invest effort in work. Persistent intrusive memories, avoidance, fear, sleep disturbance, and hyperarousal can interfere with the cognitive and emotional resources needed for effective clinical performance. Conversely, meaningful work, supportive colleagues, and professional identity may preserve engagement despite psychological strain.

Nishi et al. (2016), in a prospective follow-up of healthcare professionals after the Great East Japan Earthquake, showed that psychological resources such as resilience and posttraumatic growth were related to work engagement. Nonetheless, limited empirical evidence had directly quantified the PTSD-work engagement relationship among Ugandan healthcare workers involved in COVID-19 treatment. The present study addressed this contextual gap.

3. Methodology

3.1 Research Approach and Design

The study adopted a convergent mixed-methods cross-sectional design. Quantitative and qualitative data were collected to provide complementary evidence on PTSD, work engagement, and the relationship between the two constructs. The cross-sectional design enabled assessment of the study variables among different categories of health workers at one point in time.

3.2 Study Area

The study was conducted at Jinja Regional Referral Hospital in Jinja City, Eastern Uganda. The hospital served as a major referral and COVID-19 treatment centre for the region and provided an appropriate setting for

examining psychological experiences and work engagement among personnel directly involved in pandemic response.

3.3 Study Population and Sample

The quantitative population comprised health workers involved in COVID-19 treatment at Jinja Regional Referral Hospital. The source population was 221 health workers. Using Yamane's formula for a finite population: $n = N / (1 + Ne^2)$, where n = required sample size, N = population size (221 health workers); and e = margin of error (0.05). Upon substitution, a sample of 142 was obtained. However, a total of 103 health workers was obtained, providing an analysable quantitative data with response rate of 72.5%.

3.4 Sampling Techniques

Stratified random sampling was used to select health workers from relevant professional strata, including doctors/clinical officers, nurses/clinical support staff, and diagnostic personnel.

3.5 Data Collection Methods and Instruments

Quantitative data were collected using a self-administered questionnaire. PTSD symptoms were measured using the 20-item PTSD Checklist for DSM-5 (PCL-5), covering intrusion, avoidance, negative alterations in cognition and mood, and arousal/reactivity. Work engagement was measured using the Utrecht Work Engagement Scale (UWES), organised around vigour, dedication, and absorption.

3.6 Data Quality Control

Content validity was assessed through expert review of the study instruments. Standardised measures were used for PTSD and work engagement, and the tools were pretested before the main data collection. Completed questionnaires were checked for completeness before data entry.

3.7 Data Management and Analysis

Quantitative data were entered and analysed in SPSS version 26. Frequencies and percentages summarised categorical variables, while means and standard deviations described continuous variables and scale scores. Probable PTSD was classified using the cutoff applied in the final dissertation analysis (PCL-5 score ≥ 31). Pearson correlation was used to examine the relationship between PTSD and work engagement at a 5% level of significance.

3.8 Ethical Considerations

Ethical approval was obtained from the Bishop Stuart University Research Ethics Committee. Administrative permission was obtained from relevant authorities before

data collection. Participants provided written informed consent, participation was voluntary, confidentiality was maintained, and participants retained the right to withdraw from the study without penalty.

4. Results and Discussion

4.1 Response Rate and Participant Characteristics

Of the 142 health workers targeted, 103 participated in the quantitative component (72.5%). Five of the six planned

key informants participated (83.3%). Quantitative participants were almost evenly distributed by sex, with 51 males (49.5%) and 52 females (50.5%). Mean age was 32.37 years (SD=8.10). Most participants were aged 20–29 years (44.7%), held a diploma (52.4%), had 0–5 years of work experience (49.5%), and worked in nursing or clinical support roles (68.9%).

Table 1: Socio-demographic Characteristics of Health Workers (N=103)

Characteristic	Category	n (%) / Mean (SD)
Gender	Male	51 (49.5)
	Female	52 (50.5)
Age	Mean	32.37 (8.10)
	20–29	46 (44.7)
	30–39	39 (37.9)
	40–49	14 (13.6)
	50–59	3 (2.9)
	60+	1 (1.0)
Education	Certificate	25 (24.3)
	Diploma	54 (52.4)
	Bachelor's degree and above	24 (23.3)
Work experience	0–5 years	51 (49.5)
	6–15 years	39 (37.9)
	>15 years	13 (12.6)
Job category	Nursing/Clinical support	71 (68.9)
	Clinical/Medical officers	22 (21.4)
	Diagnostics	10 (9.7)

4.2 Extent of Posttraumatic Stress Disorder

Probable PTSD was identified among 51.46% (n=53) of health workers using the PCL-5 cutoff score of ≥ 31 , while 48.54% (n=50) scored below the cutoff. Mean symptom scores were 1.64 (SD=0.95) for intrusion, 1.53 (SD=1.12) for avoidance, 1.65 (SD=0.99) for negative cognition and mood, and 1.59 (SD=0.96) for arousal/reactivity. The overall PTSD mean was 1.61 (SD=0.85). The finding that 51.46% of health workers met the study threshold for probable PTSD indicates a substantial burden of trauma-related distress among personnel involved in COVID-19 treatment. The prevalence of probable PTSD observed in the present study was higher than estimates reported in previous systematic reviews and meta-analyses. Andhavarapu et al. (2022), based on 119 studies involving 117,143 healthcare workers, reported a pooled prevalence of posttraumatic stress symptoms of approximately 34%. Similarly, Li et al. (2021), in a meta-analysis of 65 studies involving 97,333 healthcare workers across 21 countries, reported a pooled prevalence of moderate PTSD of 21.5%. The comparatively higher prevalence in the present study may reflect differences in occupational exposure,

healthcare setting, timing of assessment, measurement criteria and availability of psychosocial support. Nevertheless, these studies collectively demonstrate the considerable psychological burden experienced by healthcare workers during the COVID-19 pandemic.

In contrast to the lower pooled estimates reported by Andhavarapu et al. (2022) and Li et al. (2021), another global systematic review and meta-analysis conducted in 2021 reported a pooled PTSD prevalence of approximately 49% among healthcare workers during the COVID-19 pandemic. This estimate is closely comparable to the approximately 51% prevalence observed in the present study. The similarity suggests that the considerable burden of posttraumatic stress observed among health workers at Jinja Regional Referral Hospital was not unique to the study setting, but reflected a broader psychological burden experienced by healthcare workers during the pandemic. This result is higher than the 39.9% reported by (Bayazit et al., 2022) among healthcare workers in Turkey, but lower than the 65.7% reported by (Kabunga & Okalo, 2021) among frontline nurses in Central Uganda.

The high burden observed in the present study may also be understood in light of the occupational risk factors identified by d'Ettorre et al. (2021). Their systematic review found that heavy workload, unsafe working environments, inadequate training and limited social support were among the factors associated with post-traumatic stress symptoms in healthcare workers during COVID-19. Such evidence suggests that differences in PTSD prevalence across healthcare settings may partly reflect variation in working conditions and the availability of organisational and psychosocial support.

The prevalence observed in the present study was also higher than that reported by Aymerich et al. (2022), whose systematic review and meta-analysis of 239 studies involving 271,319 healthcare workers estimated post-traumatic symptoms at approximately 32%. The comparatively higher prevalence of 51.46% in the present study may reflect differences in occupational exposure, professional composition, healthcare setting, timing of assessment and measurement approaches. Nevertheless, both findings demonstrate that trauma-related psychological symptoms constituted a substantial mental-health burden among healthcare workers during the COVID-19 pandemic.

The prevalence of probable PTSD in the present study was also higher than the pooled estimate reported by Ghahramani et al. (2023), whose systematic review and meta-analysis found a PTSD prevalence of approximately 37% among healthcare workers during the COVID-19 pandemic. The higher prevalence of 51.46% observed at Jinja Regional Referral Hospital may reflect differences in exposure intensity, professional composition, healthcare-system context, timing of assessment and measurement approaches. Nevertheless, both findings demonstrate that PTSD constituted a substantial psychological burden among healthcare workers during the pandemic.

Differences may reflect variation in cadre composition, timing of assessment, exposure intensity, organisational support, and measurement approaches.

4.3 Level of Work Engagement

Work engagement was moderately high overall ($M=4.33$, $SD=1.05$). Dedication recorded the highest mean ($M=4.68$, $SD=1.17$), followed by absorption ($M=4.35$, $SD=1.37$) and vigour ($M=4.03$, $SD=1.23$). Approximately three-quarters of respondents demonstrated average to high work engagement, indicating that many health workers remained psychologically invested in their roles despite the pressures associated with COVID-19 care.

Table 2: Descriptive Statistics for PTSD Symptom Clusters and Work Engagement (N=103)

Variables	Construct	Mean (SD)
PTSD	Intrusion / Re-experiencing	1.64 (0.95)
	Avoidance	1.53 (1.12)
	Negative cognition & mood	1.65 (0.99)
	Arousal & reactivity	1.59 (0.96)
	Overall PTSD	1.61 (0.85)
Work engagement	Vigour	4.03 (1.23)
	Dedication	4.68 (1.17)
	Absorption	4.35 (1.37)
	Overall work engagement	4.33 (1.05)

Despite substantial psychological strain, health workers demonstrated moderately high work engagement, with dedication recording the highest mean. This indicates that professional commitment and a sense of purpose remained strong even when workers were exposed to difficult conditions. The finding is consistent with literature showing that healthcare professionals may sustain engagement during crises when professional identity, collective responsibility, and meaningful work remain salient.

This suggests that engagement may coexist with distress rather than simply disappear in the presence of trauma. These findings can be considered alongside those of Gómez-Salgado et al. (2021), who assessed 1,459 healthcare professionals using the UWES during the COVID-19 pandemic. Their findings demonstrated that work engagement remained an important occupational outcome during the pandemic, although healthcare professionals experiencing psychological distress reported significantly lower engagement. The relatively

high engagement observed in the present study, despite considerable psychological distress, may reflect professional commitment, dedication to patient care and the capacity of health workers to remain involved in their duties during a public health emergency. Ojo et al. (2021) similarly emphasised the role of resilience in work engagement during the COVID-19 pandemic, while (Nishi et al., 2016) highlighted psychological resources that support engagement after traumatic events.

Hospitals should therefore not interpret continued attendance or high dedication as evidence that workers are psychologically unaffected. Highly committed staff may continue to perform while experiencing significant distress. Staff wellness programmes should be proactive rather than relying on visible disengagement as the trigger for support.

4.4 Relationship between PTSD and Work Engagement

Pearson correlation analysis showed a statistically significant inverse relationship between overall PTSD and work engagement ($r=-.50$, $p<.001$). Work engagement

was also negatively correlated with intrusion ($r=-.52$, $p<.001$), avoidance ($r=-.31$, $p<.001$), negative cognition and mood ($r=-.45$, $p<.001$), and arousal/reactivity ($r=-.37$, $p<.001$). Thus, higher PTSD symptom severity was associated with lower vigour, dedication, absorption, and overall engagement.

Table 3: Correlations between Work Engagement and PTSD-related Variables (N=103)

PTSD measure	Correlation with work engagement (r)	Significance
Overall PTSD	-.50	$p<.001$
Intrusion	-.52	$p<.001$
Avoidance	-.31	$p<.001$
Negative cognition & mood	-.45	$p<.001$
Arousal/reactivity	-.37	$p<.001$

The study found a moderate, statistically significant inverse relationship between PTSD and work engagement. Higher PTSD symptoms were associated with lower engagement, and the strongest symptom-cluster relationship was observed for intrusion. This pattern is plausible because recurrent distressing memories, sleep disturbance, hypervigilance, and emotional withdrawal can reduce the energy and concentration needed for sustained work performance. The inverse relationship observed in the present study is consistent with Gómez-Salgado et al. (2021), who found that healthcare professionals experiencing psychological distress had significantly lower levels of work engagement during the COVID-19 pandemic. Although their study examined psychological distress more broadly rather than PTSD specifically, the findings support the proposition that adverse psychological experiences can interfere with healthcare workers' vigour, dedication and absorption in their professional roles. The present study extends this evidence by demonstrating a moderate negative relationship specifically between posttraumatic stress symptoms and work engagement among health workers involved in COVID-19 treatment at Jinja Regional Referral Hospital.

The result supports Gómez - Salgado et al. (2021), who found that psychological distress was associated with reduced work engagement among healthcare professionals. It also aligns with the broader proposition of Social Support Theory that supportive relationships and organisational resources may buffer the adverse effects of stress. The qualitative findings in the present study suggest that teamwork and moral purpose may have helped some workers remain engaged despite trauma symptoms.

The prevalence observed in the present study was also higher than the range of 7.4%–37.4% reported by De Kock et al. (2021) in their systematic review of hospital healthcare workers. However, De Kock et al. identified direct exposure to COVID-19 patients as an important risk

factor for adverse mental-health outcomes. This is particularly relevant to the present study because participants were health workers directly involved in COVID-19 treatment. The comparatively high prevalence observed at Jinja Regional Referral Hospital may therefore partly reflect the psychological burden associated with frontline exposure, although differences in measurement, study populations and healthcare contexts should also be considered.

Because the study was cross-sectional, the observed association should not be interpreted as causal. PTSD may reduce work engagement, but low engagement or difficult organisational conditions could also increase vulnerability to distress. Longitudinal studies are needed to clarify temporal pathways and test whether social support, resilience, leadership, and workplace resources mediate or moderate the relationship.

5. Conclusions and Recommendations

5.1 Conclusion

The study concludes that health workers involved in COVID-19 treatment at Jinja Regional Referral Hospital experienced a substantial burden of posttraumatic stress while simultaneously maintaining meaningful levels of work engagement. More than half met the study threshold for probable PTSD, yet overall engagement remained moderately high, particularly for dedication. PTSD and work engagement were significantly and inversely related, indicating that increasing trauma symptoms were associated with reductions in vigour, dedication, absorption, and overall engagement. The convergent quantitative and qualitative findings demonstrate that frontline commitment can coexist with psychological distress and should not be interpreted as evidence of psychological wellbeing.

5.2 Recommendations

1. The Ministry of Health should integrate psychological support, trauma-informed care, and health-worker

mental-health surveillance into national emergency preparedness and response frameworks.

2. Jinja Regional Referral Hospital and comparable facilities should institutionalise peer-support, critical-incident debriefing, confidential counselling, and routine mental-health screening for staff involved in high-risk emergency care.
3. Hospital management should strengthen occupational health and wellness programmes, supportive supervision, staffing arrangements, and reliable access to protective equipment to reduce avoidable sources of stress.
4. Health-worker training and continuing professional development should include stress management, self-care, psychological first aid, and trauma-informed practice.
5. Future studies should use longitudinal designs and examine the mediating or moderating roles of social support, resilience, spirituality, leadership, and team climate in the relationship between PTSD and work engagement.

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