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Influence of Job Demand on Mental Health among Police First Responders in Benue State, Nigeria

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Abstract: This study investigated influence of job demand on mental health among police first responders in Benue State, Nigeria, using 365 active-duty officers drawn from the Benue State Police Command through multistage sampling techniques. A Mental Health Inventory-38, was used to assess psychological distress and well-being, and the Job Demand subscale of the Job Content Questionnaire, comprising 5 items measuring psychological workload, time pressure, and role conflict. Simple linear regression analysis demonstrated that job demand exerted a significant positive influence on mental health challenges (β = .279, p < .001), with the model incorporating related occupational factors, explaining approximately 64.2% of the variance in mental health scores. Elevated job demands, particularly excessive workload, prolonged shifts, repeated trauma exposure, and resource constraints amid ongoing insecurity, were strongly associated with poorer mental health outcomes, including heightened risks of anxiety, depression, burnout, and posttraumatic stress symptoms. These results align with the Job Demands-Resources (JD-R) framework and underscore the urgent need for evidence-based interventions such as workload management, trauma debriefing, and organizational support to mitigate occupational stressors and enhance resilience in high-risk policing environments like Benue State.
Keywords: Job Demand, Mental Health, Police First Responders.

INTRODUCTION

Mental health encompasses an individual's emotional, psychological, and social well-being, influencing how they think, feel, and act in daily life. According to the World Health Organization (WHO, 2022), mental health is a state of well-being in which a person realizes their own abilities, can cope with the normal stresses of life, work productively, and contribute to their community. It is not merely the absence of mental disorders but involves positive attributes such as resilience, self-esteem, and the capacity for healthy relationships. Globally, mental health challenges affect over 970 million people, with conditions like depression and anxiety accounting for a significant portion of the global disease burden (WHO, 2023). Factors such as socioeconomic inequalities, environmental stressors, and access to care exacerbate these issues, leading to substantial economic costs estimated at US$1 trillion annually in lost productivity (Chisholm *et al.*, 2016). In high-stress occupations, mental health is particularly vulnerable, as chronic exposure to demanding environments can lead to disorders like posttraumatic stress disorder (PTSD), depression, and burnout (Keyes and Simoes, 2023).

Among police first responders law enforcement personnel who are the initial responders to emergencies, securing scenes and providing immediate aid—mental health challenges are amplified due to the inherent risks of their roles. Globally, police first responders experience elevated rates of mental health disorders, with PTSD prevalence ranging from 7% to 19% and depression affecting up to 25%, often exceeding general population rates by twofold (Syed *et al.*, 2020; Wickramaratne *et al.*, 2024). These issues stem from repeated exposure to violence, human suffering, and life-threatening situations, compounded by organizational factors like shift work and inadequate support (Violanti *et al.*, 2017). Longitudinal studies, such as the Buffalo Cardio-Metabolic Occupational Police Stress (BCOPS) study, link high job demands to burnout and emotional exhaustion, with low job control exacerbating anxiety and PTSD (NIOSH, 2022). Social support acts as a

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buffer, reducing depression by up to 30% (Thoits, 2011), yet stigma and rigid hierarchies often hinder help-seeking, leading to absenteeism, excessive force, and suicide rates 10 times higher than civilians (Institute of Health, 2021).

In Africa, these global patterns intensify due to structural barriers in low- and middle-income countries (LMICs), where over 75% of those needing mental health services lack access owing to stigma, outdated infrastructure, and a scarcity of professionals (0.9 per 100,000 people) (WHO, 2017; Komu *et al*., 2025). Police first responders are disproportionately affected, with 13% experiencing lifetime PTSD amid operational stressors like long hours and violence in conflict zones (U.S. Department of Health and Human Services, 2024). Sub-threshold PTSD symptoms, such as hypervigilance and irritability, often lead to maladaptive coping like substance use (Jones, 2017). In South Africa, studies show higher rates of anxiety, depression, PTSD, and alcohol abuse among police, moderated by peer support (Padmanabhanunni and Pretorius, 2025). However, only 11 of 47 African countries integrated mental health into disaster plans by 2025, perpetuating marginalization, especially for rural officers (WHO Regional Office for Africa, 2025).

In Nigeria, mental health burdens converge with national crises, affecting an estimated 450,000 individuals with disorders, including 25% of police (WHO, 2017; Association of Psychiatrists of Nigeria, 2018). Untreated needs reach 80% due to stigma and urban-centralized services (Ugochukwu *et al*., 2020). Among police, PTSD is mediated by substance use, with operational stress predicting distress (Abel *et al*., 2018; Sunday, 2024). High job demands cause burnout, low control fosters anxiety, and limited support correlates with exhaustion (Bakker *et al*., 2003; Iwuoha & Aniche, 2021). In Benue State, insecurity from Fulani attacks has displaced over 500,000, elevating PTSD rates to 5–9% among first responders (Loo *et al.,* 2016; Ryan *et al*., 2020). Operational stress, coupled with political interference and poor support, worsens outcomes (Iwuoha and Aniche, 2021).

Empirical research worldwide underscores the profound impact of job demands on police first responders' mental health, often framed by the Job Demands-Resources (JD-R) model, which posits that high psychological demands (e.g., workload, emotional labor) deplete resources, leading to strain and psychopathology (Bakker and Demerouti, 2017). A state-of-the-art review by Wickramaratne *et al*., (2019) synthesized 50 studies, revealing consistent associations between police stressors (trauma exposure, shift work) and outcomes like PTSD (prevalence 0.8%–41.1%), depression (5%–43%), and anxiety, with job demands as a key predictor. The review highlighted physiological mechanisms, such as elevated cortisol from chronic demands, contributing to cardiovascular risks and emotional exhaustion.

A large-scale U.S. study (N = 2,669) by Purba and Demou (2024) used structural equation modeling to test a path model, finding that job demand stressors (trauma, operational overload) explained 42% of variance in burnout and psychological distress, mediating turnover intentions. Officers with high demands reported 35% higher depressive symptoms, underscoring the need for resource buffers. Similarly, a cross-sectional analysis by Phua and Chew (2025) in Singapore (N = 843) applied the PRECEDE model, showing that job stress and traumatic experiences directly predicted 28% of mental health variance, with resilience and support mitigating effects (β = -.22 for support).

A mixed-methods study by McCanlies *et al*., (2023) in the U.S. (N = 417 sworn and non-sworn officers) integrated surveys and hair cortisol analysis, revealing 24% PTSD prevalence linked to operational demands, with non-sworn officers showing higher symptomology (39%) due to indirect trauma exposure. The study emphasized biomarkers' role in validating self-reports, confirming demands' physiological toll. Meta-analytic evidence from Violanti *et al*., (2019) across 20 international studies affirmed that high-strain jobs (demands without control) doubled PTSD odds, with global prevalence exceeding civilian rates by 2–3 times.

Empirical studies on police job demands and mental health reveal amplified risks in resource-scarce, conflict-laden contexts, where demands like violence exposure and understaffing intersect with systemic barriers (WHO, 2017). A cross-sectional study by Padmanabhanunni *et al*., (2019) in South Africa (N = 429 police and paramedics) used validated scales (PHQ-9, GAD-7, PCL-5), finding 47.3% depression and 48.5% PTSD rates, primarily driven by operational demands (β = .45 for trauma exposure). Peer support buffered effects, reducing symptoms by 22%. In a Namibian study (N = 200), Van der Meulen et al. (2024) employed the Police Stress Questionnaire, reporting that organizational demands (e.g., workload, bureaucracy) predicted 31% of burnout variance, with 65% of officers experiencing moderate-to-high distress. The study advocated for mental health programs, noting demands' role in suicidal ideation (OR = 2.1). Similarly, a longitudinal analysis in South Africa by Mokwena and Huma (2022) (N = 165) tracked coping mechanisms, revealing avoidance strategies (linked to high demands) correlated with 40% higher anxiety (r = .38), moderated by social support. A comparative study across African forces (Ghana, Ethiopia; N = 618) by Asante *et al*., (2025) used the JD-R framework, showing low control amid high demands elevated PTSD odds 2–3-fold (OR = 2.8), with 50% burnout prevalence. In Uganda, Madrama and Ovuga (2006) found high alcohol dependence (25%) tied to demands, impairing performance. These studies

highlight Africa's unique challenges, like conflict zones, where demands perpetuate cycles of poor mental health.

A nationwide cross-sectional survey by Adebusuyi (2024) (N = 528) revealed that high workload predicted psychological distress (β = .35) and burnout (r = .42), with 67% of officers reporting exhaustion from long hours and poor logistics. Officers in high-crime areas showed 2.5 times higher depression rates. In a randomized controlled trial by Ogbuanya *et al*., (2019) (N = 200 southeast Nigeria police), rational emotive occupational health coaching reduced stress from demands by 28% post-intervention, improving well-being (F(1,198) = 12.45, p < .01). The study linked untreated demands to PTSD (prevalence 22%).

A dissertation by Adepelumi (2018) (N = 200 Borno State officers) used mixed methods, finding occupational stress from counter-insurgency demands caused 65% cognitive dysfunction and 19% alcohol disorders, with demands explaining 51% of variance in suicidal ideation. In Keffi, Nasarawa State, Sani *et al*., (2023) (N = 150) reported job demands and work-life imbalance predicted 39% of dissatisfaction (R² = .39), advocating annual assessments.

Lasisi (2021) (N = 300 southwest officers) identified shift work and hostility as demands driving 45% stress variance, while Ojedokun and Idemudia (2014) (N = 412 northern/central) noted demands rendered control "irrelevant," elevating PTSD (OR = 2.7). These studies call for tailored interventions in Nigeria's volatile policing landscape.

Despite the critical nature of this problem and its global attention, there remains a limited number of empirical studies in Africa, particularly in Nigeria focused on job demand and mental health among police first responders hence, this study examined the influence of job demand on mental health among Police First Responders in Benue State, Nigeria.

Design

A cross-sectional survey design was adopted to evaluate the association between job demand and mental health among police first responders. The representative subset was gotten at a single point in time to examine the relationships between variables of the study. This non experimental method enabled the researcher to capture the current conditions of the police first responders without tracking changes over time. Overall, for a high-risk, operationalized population like Benue police first responders facing acute stressors in an insecure setting, the cross-sectional approach balances scientific rigor with practical viability, yielding actionable insights where more intensive designs might be unfeasible.

Population

The study targeted all 4,903 active-duty police officers in the Benue State Police Command, as

documented in the Police Nominal Roll (2024), in active service under the administrative control of the Commissioner of Police. The selection criteria for exclusion and inclusion was for officers in active service who have served for at least one year and currently working in the State Police Command - Area Commands and Divisions; while retired officers and those not in the tactical units were excluded in the research.

Sampling Technique

The sample size for this study was determined using the Taro Yamane (1967) formula as seen below;

$$n = \frac{N}{1 + N(e)^2}$$

Where;
n = Required sample size
N= Total population of Police First Responders from the Benue State, Nigeria Command as at November, 2024, which was = 4,903;
e = Level of error at 5%
1 = Constant

$$n = \frac{4,903}{1 + 4,903(0.05)^2}$$
$$n = \frac{4,903}{1 + 4,903(0.0025)}$$
$$n = 369.83$$

A total of 387 questionnaires were printed and administered to Police First Responders within the Benue State Police Command in their respective Zonal Area Commands and Divisions using purposive sampling technique which is suitable for this study. However, after the questionnaires were filled/completed, only 365 were returned for analysis and analyzed using SPSS. While the 22 could not be accounted for due to either unavailability of the police officers or operational engagements in the battlefield.

Participants

A total of 365 Police First Responders participated in the study. The number comprised 327 (89.6%) males and 38 (10.45) females. Their age ranged from 18-60 (X = 2.62, SD = .605). As for their age, 23 (6.3%) were between 18-30 years, 98 (26.8%) were 31-40 years, 244 (66.8%) were 41-60 years. About their marital status, 22 (6.0%) were single, 3334 (91.5%) were married, while 6 (1.6%) were living together as intending couples. In terms of religion, 338 (92.6%) were Christians while 27 (7.4) were Islam. About their education, 161 (44.1%) has secondary education and 204 (55.9%) had attended tertiary education. On rank/designation, 64 (17.5%) were Corporal, 83 (22.7%) were Sergeants, 197 (54.0%) were Inspectors and 21 (5.8%) were ASP. On marital status, 173 (47.47) were located in the Urban area while 191 (52.3%) were located in the Semi-Urban/Rural areas.

Instruments

Three standardized instruments were used to collect data on occupational characteristics, alcohol use

and mental health among Police First Responders in Benue State, Nigeria. Demographic information on gender, age, rank in service, level of education and marital status were collected in section A of the questionnaire, while section B assessed the first responder's mental health, Section C assessed occupational characteristics and section D assessed alcohol use among the police first responders. The questionnaires for the study were;

i. The Mental Health Questionnaire
ii. Job Demand Control Questionnaire (English Version), to assess occupational characteristics among the police first responders.

A. The Mental Health Questionnaire

The Mental Health Questionnaire-38 (MHQ-38) is a 38-item self-report instrument designed to assess general psychological distress and mental well-being in adult populations. It measures current mental health status across multiple symptom domains and positive well-being. It is particularly useful in general practice, occupational health, and population surveys because of its brevity and good psychometric properties. The tool has 4 main subscales scored on a 5-point Likert scale (0 = "not at all" to 4 = "extremely"). The single scale assesses overall level of mental health problems while the subscales measure:

i. **Somatization** (9 items: 1, 5, 9, 13, 17, 21, 25, 29, 33) – Physical symptoms with a psychological origin (e.g., headaches, fatigue, dizziness).
ii. **Anxiety and Tension** (10 items: 2, 6, 10, 14, 18, 22, 26, 30, 34, 37) – Symptoms of anxiety, nervousness, restlessness, panic-like feelings.
iii. **Depression / Loss of Interest** (10 items: 3, 7, 11, 15, 19, 23, 27, 31, 35, 38) – Depressed mood, anhedonia, feelings of worthlessness, suicidal ideation.
iv. **Social Dysfunction / Aggression** (9 items: 4, 8, 12, 16, 20, 24, 28, 32, 36) – Problems in social functioning, irritability, aggression, interpersonal difficulties.

The scale has a Cronbach's α typically 0.92–0.96 for the total scale Subscales: 0.80–0.90 (very good), and a test-retest reliability coefficient of r = 0.78–0.87 over 2–4 weeks (good to excellent) and.

Scoring:

For self-administration, sum the numbers (0–4) for the relevant items, higher scores always indicate worse mental health. The total score (0–152) is the most reliable single indicator of overall psychological distress.

B. The Job Demand-Control Questionnaire (JDCQ) (Robert Karasek, 1979)

The Job Demand-Control Questionnaire (JDCQ) was developed by Robert Karasek in 1979, based on his Job Demand-Control (JDC) Model, which examines how occupational characteristics (workload and time pressure) and job control (decision latitude and autonomy) influence stress and well-being in the workplace. It consists of 16 items distributed across three dimensions: Job demand (5 items), Job control (decision latitude, 6 items), and Social Support (Measures support from colleagues and supervisors, 6 items).

Psychometric Properties of JDCQ

The JDCQ has been validated in various languages and among different occupational groups, including white-collar employees in Switzerland and the United States. Its comprehensive assessment of occupational characteristics, control, and support makes it a potentially suitable tool for evaluating work-related stress in high-stress professions such as Police First Responders.

JDCQ is scored by summing responses for each dimension (occupational characteristics, Job Control, and Social Support). Higher scores on occupational characteristics indicate higher stress, while higher scores on job control and social support indicate better working conditions.

Reliability: The scale is highly reliable with internal consistency (Cronbach's alpha):

i. Job demand (Items 1-5): Typically ranges from α = 0.70 to α = 0.85
ii. Job Control (Decision Latitude) (Items 6-10): Typically ranges from α = 0.75 to α = 0.85
iii. Social Support (Items 11-15): Typically ranges from α = 0.80 to α = 0.90
iv. These values indicate good to excellent internal consistency.

About the Test-Retest Reliability, studies have shown moderate to high stability over time, with correlations between α = 0.60 and α = 0.80 over weeks or months.

Validity:

The scale has Construct, Convergent, Predictive and Cross-Cultural Validity for all the dimensions measured across the general population. Typically, the questionnaire items are rated on a Likert scale (e.g., 1 = Strongly Disagree to 4 = Strongly Agree).

Procedure

The researcher obtained a letter of introduction from the Department of Psychology, Fr. Moses Orshio Adasu University Makurdi - MOAUM, to the Benue State Police Commissioner of Police to seek consent and approval to conduct the research on Police First Responders within the Command to enable him gather relevant information from them. In doing so, the Researcher ensured confidentiality and anonymity in data handling by personally visiting participants in the headquarters, Area Commands and Divisional police offices in Zone B to administer the tools while his Research Assistants administered the questionnaires in

Zones A and C. Participants were briefed on how to fill the survey instruments, starting with section 'A' to collect their demographic information, section 'B' to obtain information on mental health, section 'C' to gather information on occupational characteristics and section 'D' to collect data on alcohol use among Police First Responders in Gwer West, Guma, Agatu, Apa, Katsina Ala and Ukum Local government Areas respectively.

To ensure timely completion and accuracy in the study, 6 research assistants with 'A' level educational background were recruited and guided to assist in the data collection process, thereby, adhering strictly to ethical principles guiding the study.

Data Analysis

Data were analyzed using IBM SPSS version 26. Multiple linear regression was performed to test the predictive influence of job demand on mental health, while controlling for related occupational variables. Descriptive statistics summarized participant characteristics. While multiple regression analysis was used to determine the influence of the independent variables (Occupational characteristics - job demands, job control, and social support) and likely covariate which is alcohol use. Also, the Job Demand-Control-Support model explicitly predicts interaction effects (high demands + low control = worst outcomes; high support buffers this).

RESULTS

Table 1: Summary of simple Linear Regression Analysis Showing the Significant Positive Influence of Job Demand on Mental Health among Police First Responders in Benue State - Nigeria

Variables	R	R²	F	df	β	t	Sig.
Constant	.801	.642	161.087	2,362		34.924	.000
Job Demand					.279	3.721	.000

The primary hypothesis tested whether job demand significantly influences mental health among police first responders in Benue State, Nigeria. Simple linear regression analysis showed significant positive influence of Job demand on mental health among police first responders in Benue State, Nigeria [R = .801, R² = .642, F(2,362) = 161.087, P < .000], explaining 64.2% of the variance in mental health scores (higher scores indicating poorer mental health). Specifically, job demand emerged as a strong positive predictor (β = .279, t = 3.721, p < .001). This indicates that higher levels of job demand—encompassing excessive workload, time pressure, emotional strain, and exposure to traumatic events—were associated with significantly poorer mental health outcomes.

Descriptive trends showed participants reporting moderate-to-high job demands, aligned with poorer mental health profiles, particularly among those in semi-urban/rural postings facing frequent conflict responses.

DISCUSSION

The findings confirm that job demand significantly and positively influences mental health among police first responders in Benue State, Nigeria, consistent with theoretical frameworks and empirical evidence. The Job Demands-Resources (JD-R) model (Bakker and Demerouti, 2017) posits that excessive psychological demands deplete energy, leading to strain and mental health deterioration precisely what was observed here (β = .279, p < .001).

Globally, similar patterns emerge: The Buffalo Cardio-Metabolic Occupational Police Stress (BCOPS) study linked high demands to burnout and emotional exhaustion (NIOSH, 2022), while Violanti *et al*., (2017) found demands predicted PTSD and depression in U.S. officers. In Africa, Padmanabhanunni and Pretorius (2025) reported operational demands driving 47.3% depression and 48.5% PTSD rates in South African police/paramedics. Nigerian studies echo this: operational stress from insurgencies and communal clashes predicts distress (Sunday, 2024; Abel *et al*., 2018), with high demands causing burnout and absenteeism (Iwuoha and Aniche, 2021).

In Benue's context, relentless exposure to farmer-herder violence (ACLED, 2025) amplifies demands, explaining elevated PTSD (5–9%; Loo *et al*., 2016) and the strong association found. The 64.2% explained variance underscores job demand as a dominant factor, surpassing many international benchmarks, likely due to resource scarcity and conflict intensity. These results highlight maladaptive outcomes from unmanaged demands, including potential alcohol use escalation (though not primary here), aligning with global co-occurrence patterns (Serve and Protect, 2023). Limitations include cross-sectional design (precluding causality) and self-report bias, yet the robust effect size supports urgent interventions.

CONCLUSION

This study conclusively demonstrates that high job demand significantly impairs mental health among police first responders in Benue State, Nigeria. Accounting for substantial variance in psychological distress, demands driven by trauma exposure, workload, and operational pressures in a protracted conflict zone, emerge as a critical risk factor. These findings affirm the

JD-R model's applicability in high-risk African policing contexts, where demands overwhelm resources, leading to elevated anxiety, depression, burnout, and PTSD risk. Without targeted mitigation, officer well-being and operational effectiveness remain compromised in Benue's volatile security landscape.

Recommendations

The Study Recommends the Following:

i. Implementation of mandatory rotational shifts, mandatory rest periods post-trauma, and caps on consecutive deployments to reduce chronic exposure to high demands.

ii. There should routine psychological debriefing and access to confidential counseling within the Benue State Police Command, integrated into operational protocols.

iii. Specialized training in stress management and resilience should be provided alongside improved logistics (example, equipment, manpower) to alleviate perceived demands.

iv. There should be national integration of mental health screening in police welfare programs, with Benue as a pilot for conflict-zone commands.

v. Longitudinal studies should be carried out to track job demand-mental health trajectories and evaluate intervention efficacy.

Contribution to Knowledge

i. Provides rare empirical evidence on job demand's specific impact on mental health in a Nigerian conflict zone (Benue State), addressing a critical gap in localized policing research.

ii. Quantifies substantial explanatory power (up to 64.2% variance) of occupational demands in an understudied LMIC context, extending JD-R model validation to African high-risk policing.

iii. Highlights context-specific amplifiers (e.g., communal violence, resource scarcity), informing tailored interventions beyond global generalizations.

iv. Supports emerging national efforts (e.g., Police Counselling Unit repositioning) with data-driven insights for evidence-based policy in vulnerable commands.

v. Contributes baseline data for future comparative studies across Nigerian states or African police forces facing similar demands.

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