

Mental Distress among Healthcare Workers at Kilwa Road Police Regional Referral Hospital, Dar es Salaam, Tanzania: Prevalence and Associated Factors

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Abstract

Background: Mental distress refers to a range of symptoms associated with common mental disorders, including depression, anxiety, and somatic complaints that may affect an individual's functioning and well-being. Healthcare workers are among the professionals who are more vulnerable to mental distress, which could be due to individual and work-related factors such as the demanding nature of their Work, including heavy workloads, long working hours, exposure to suffering and death, work-related stress, and staff shortages. Enhancing mental health and well-being among healthcare workers is essential not only for their individual well-being but also for the quality of patient care and the provision of healthcare services. Therefore, this study aimed to assess the prevalence of mental distress and its associated factors among healthcare workers (HCWs) at Kilwa Road Police Regional Referral Hospital in Dar es Salaam, Tanzania.

Design. A hospital-based cross-sectional study.

Study Setting: Kilwa Road Police Regional Referral Hospital in Dar es Salaam, Tanzania

Participants: 241 HCWs were screened for mental distress using the World Health Organization self-reporting questionnaire, 20-item (SRQ 20) tool in the past 30 days. Participants scoring six and above were considered to have mental distress.

Results: Among the 241 participants enrolled in the study, 131 (54.4%) were female, and 110 (45.6%) were male, with median ages ranging from 20 to 59 years. In the past 30 days, more than half of the participants (n = 131; 56.4%) reported experiencing mental distress, including 82 females (62.6%) and 54 males (49.1%). Health care workers who resided in government housing and those who reported being dissatisfied with their job were more likely to report experiencing mental distress (aOR = 2.31 (95% CI 1.07 to 4.98) and (aOR = 6.57 (95% CI 3.22 to 13.45), respectively.

Conclusion: Reported mental health distress is common among healthcare workers at Kilwa Road Police Regional Referral Hospital. Therefore, there is a need to implement interventions to enhance the detection of mental distress among HCWs at Kilwa Road Police Regional Referral Hospital. While implementing it, Special consideration should be given to healthcare workers who reside in government housing, and those who reported that their job dissatisfied them.

Background

Mental distress is a non-specific psychological condition characterized by symptoms of depression, anxiety, somatic complaints, and reduced psychological functioning. It represents a substantial public health challenge worldwide because of its high prevalence and adverse effects on individuals' health, well-being, and productivity [1]. Healthcare workers (HCWs) are particularly vulnerable to mental distress due to the demanding nature of their Work [1]. These include high patient loads, long working hours, exposure to suffering and death, a small number of staff compared to needs, and challenges in balancing professional and personal responsibilities [2, 3]. Poor mental health among HCWs has important implications not only for the well-being of the workforce but also for the quality of patient care, patient safety, and productivity [1]. Globally, studies have reported a substantial burden of mental distress among healthcare workers, and compared to the general population, it is consistently higher. A systematic review and meta-analysis study reported the following pooled prevalence of mental health conditions among HCWs: depression: 28–30%, anxiety: 28–31%, post-traumatic stress disorder symptoms: 24–26%, and Psychological distress: 40–45% [4]. During COVID-19, a systematic review of studies examining the mental health impact of COVID-19 on HCWs showed the prevalence ranges for depression 13.5%–44.7%; anxiety 12.3%–35.6%; acute stress reaction 5.2%–32.9%; post-traumatic stress disorder 7.4%–37.4%; insomnia 33.8%–36.1%; and occupational burnout 3.1% [5]. A systematic review and meta-analysis studies in sub-Saharan African found wide-ranging prevalence estimates for depressive (2.1–75.7%), anxiety (4.8–96.5%), and PTSD symptoms (11.7–78.3%) [6]. A study in Malawi among frontline HCWs reported the prevalence rates of depression (31%), anxiety (30%), and post-traumatic stress disorder (25%) [8]. In Ethiopia, studies on mental health distress among HCWs have reported that the prevalence of depressive symptoms was 27.8% and 21.9% [9]. A study in Ethiopia aimed to compare the prevalence of depression and burnout risk among HCWs in urban and rural areas and found a prevalence of depression of 16.5% and 8.9%, and burnout risk of 39.8% and 12.6%, respectively [10]. Tanzania has also not been spared; studies have indicated that the prevalence of mental distress among HCWs is substantial. A cross-sectional study among primary healthcare providers reported that 54.5% experienced burnout [11]. Studies have reported that approximately 26% of healthcare workers experience stress and anxiety [12]. A study conducted among resident doctors in tertiary teaching hospitals found a prevalence of burnout syndrome of 33.7% [13]. Moreover, studies among HCWs have reported the prevalence of psychological distress rates of 42% and emotional distress rates of 54% [14]. A scoping review on occupational hazards in Tanzania highlighted that healthcare workers face psychosocial stressors alongside physical risks, largely due to resource constraints and poor working conditions [15].

Evidence shows that globally, HCWs' mental health distress is influenced by both individual and workplace factors [1]. Previous studies have shown that marital status may affect mental health outcomes, with unmarried, divorced, or widowed healthcare workers often reporting higher levels of psychological distress; this could be due to reduced social and emotional support [5, 7]. Occupational role has also been associated with HCWs' mental health outcomes [4–5]. Nurses and frontline healthcare workers frequently experience higher levels of stress, anxiety, depression, and burnout than other professional groups. This could be due to prolonged patient contact, emotional demands, shift work, and heavy workloads [1, 3]. Moreover, years of work experience may influence vulnerability to mental distress, with less experienced workers often reporting higher psychological burden. This could be due to demands for role adjustment and work demands [3]. A history of mental health conditions has been documented as a predisposing factor for future episodes of psychological distress [3]. Individuals with previous mental health conditions may be more susceptible to workplace stressors and adverse psychological outcomes, in particular if there is an increase in occupational demand [1, 3]. Job satisfaction is another important factor that may influence an individual's mental health outcomes. Studies have reported that HCWs who reported being dissatisfied with their work environment, remuneration, career progression opportunities, or organizational support are more likely to experience mental distress and burnout [2, 11]. In addition, studies have reported that

HCWs experience physical fatigue, often resulting from excessive workloads, prolonged working hours, staff shortages, and shift schedules, and have also reported experiencing poor mental health outcomes, including depression, anxiety, and psychological distress[1, 3].

Despite the evidence on the magnitude and factors associated with mental distress among HCWs, there is limited contextual information in Tanzania. Moreover, limited available evidence is among HCWs working in general public healthcare settings [11–14]. It is acknowledged that military hospitals have represented a unique context for healthcare service provision. Therefore, continue to add more insight on the magnitude and factors associated with mental distress among HCWs in Tanzania. Thus, it will inform the need for workplace mental health interventions, developing supportive policies, and strengthening occupational health services.

Methods

Study design and settings: This facility-based cross-sectional study assessed the prevalence of mental distress and associated factors among HCWs. Kilwa Road Police Regional Referral Hospital is located in Temeke Municipal, Dar es Salaam Region, Tanzania. The Kilwa Road Police Regional Referral Hospital is among the military hospitals under the Ministry of Home Affairs in Tanzania. However, the Tanzania Ministry of Health has designated it as a regional referral hospital within the Dar es Salaam region and therefore receives referred patients from the district hospitals. According to the Tanzanian 2022 national census, Dar es Salaam has a total population of 5,383,738 [16]. The Kilwa Road Police Regional Referral Hospital employs both non police and police healthcare professionals. It has 350 employees, including both supportive administrative and health services providers. Kilwa Road Police Hospital provides inpatient and outpatient services.

Participants and sample size

HCWs, both non police and police officers, who have been employed at Kilwa Road Police Hospital, including nurses, clinicians, radiologists, laboratory technicians, pharmacists, and dentists. The inclusion criteria comprised healthcare workers employed at Kilwa Road Police Hospital for at least 1 year and willing to provide written informed consent. The one-year employment criterion was selected to ensure that participants had completed the institutional probation period and had adequate exposure to the workplace environment, while minimizing the potential influence of temporary adjustment-related psychological symptoms associated with commencing a new job[17]

Sample size and sampling procedure: Convenience sampling was employed; a total of 241 healthcare workers participated in the study. The list of eligible participants was obtained from the hospital's staff records. Healthcare workers at their respective workstations were approached and invited to provide informed consent to participate in the study.

Variables Assessed: In this study, mental distress among healthcare workers was the dependent outcome variable. The independent variables included marital status, occupational role, and years of work experience, history of mental illness, work-related conflicts, job satisfaction, and physical fatigue.

Data collection and variables

Data collection was conducted through face-to-face interviews. Data collection tools were piloted, pre-tested, and modified accordingly. This helped the research team plan for the number of interviews to be conducted by one data collector per day while minimizing interference with the provision of clinical services. The questionnaire was administered in Swahili by the first Author, with the assistance of two research assistants. These assistants were selected for their extensive experience and prior research involvement. To ensure adherence to the study protocol, they received training on the study objectives, data collection instruments, administration procedures, and ethical considerations.

Measures

Sociodemographic variables collected in the study included sex, age, marital status, educational level, place of residence, and employment status.

Mental distress

Mental distress was assessed using the World Health Organization Self-Reporting Questionnaire (SRQ-20), a 20-item screening instrument designed to identify symptoms of common mental disorders, including depression, anxiety, somatic complaints, and reduced psychological functioning experienced during the preceding 30 days. Participants responded "Yes" if they had experienced a symptom during the past 30 days and "No" if they had not. Each affirmative response was scored as one point, yielding a total score ranging from 0 to 20, with higher scores indicating greater psychological distress. A cut-off score of ≥ 6 was used to indicate probable mental distress, consistent with validation studies conducted in Tanzania. The SRQ-20 has demonstrated good psychometric properties across diverse settings, including Tanzania, and is widely used as a reliable screening tool for common mental disorders in both community and healthcare populations [18-19].

Job satisfaction

Job satisfaction was assessed using the Minnesota Satisfaction Questionnaire Short Form (MSQ-SF-20) [20]. The tool measures job satisfaction through both intrinsic and extrinsic dimensions. Intrinsic job satisfaction reflects satisfaction derived from the nature of the Work itself, such as autonomy, responsibility, creativity, and opportunities to utilize one's abilities. In contrast, extrinsic job satisfaction concerns external aspects of Work, such as supervision, organizational policies, compensation, working conditions, and opportunities for advancement [21]. Supportive supervision, access to professional development, and adequate staffing were positively associated with job satisfaction. In contrast, low salary and high workload were negatively associated [22-23] The questionnaire comprises 20 items covering domains including activity, independence, variety, social status, supervision (human relations and technical), moral values, job security, social service, authority, ability utilization, organizational policies and practices, compensation,

responsibility, creativity, working conditions, co-worker relationships, recognition, achievement, and advancement. Responses are rated on a five-point Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied). Although the MSQ-SF-20 has not undergone formal psychometric validation in Tanzania, it has demonstrated acceptable reliability in studies involving healthcare workers. Direct evidence shows that the MSQ-SF-20 yields reliable scores in healthcare worker populations and has been widely used in sub-Saharan African settings [35].

Data analysis: Sociodemographic characteristics were summarized using proportions for categorical variables and medians and interquartile ranges for continuous variables. A multivariable model was used to examine factors associated with mental distress. All variables- age, sex, marital status, education level, living arrangement, employment status, years of experience, job satisfaction, family history of mental illness, and recent alcohol use, were included in the multivariable models. Crude and adjusted odds ratios, along with corresponding 95% confidence intervals and p-values, were reported. A two-sided $P < 0.05$ was considered statistically significant. Data were analyzed using STATA version 14.

Ethical consideration: Ethical approval for this study was obtained from the Muhimbili University of Health and Allied Sciences Ethical Review Board (MUHAS), under reference number MUHAS-REC-04-2024-2159. Permission to conduct the study was granted by the Chief of Police Force, on behalf of the Commanding Officer of the Police Medical Units. All procedures involving human participants were conducted in accordance with the ethical standards of the institutional research committee and the ethical principles outlined in the Declaration of Helsinki and its subsequent amendments or comparable ethical standards[24] Participants who screen positive for mental distress are generally referred to psychological services to receive professional assessment, counselling and safe patient care.

Results

Sociodemographic and clinical characteristics of the participants

A total of 241 healthcare workers participated in the study. The median age of participants was 38 years, with an age range of 20 to 59 years. More than half, 54.4% ($n = 131$), were female. nearly three-quarters 60.6% ($n = 146$) were nurses and 26.9% ($n = 65$) were doctors. Just over half (52.3%, $n = 126$) were permanently employed. Regarding work experience, 44% ($n = 106$) had between 5 and 14 years of service, while 27.4% ($n = 66$) had less than 5 years of service. More than two-thirds, 67.6% ($n = 163$), resided in government-provided accommodation. More than 43.2% ($n = 104$) reported being dissatisfied with their roles. Just one-third, 34.4% ($n = 83$), reported alcohol use (Table 1).

Table 1
Sociodemographic and clinical characteristics of the HCWs at Kilwa Road Police Regional Referral Hospital in Dar es Salaam, Tanzania in 2024 (N = 241)

Characteristics	Categories	Total(N = 241)	Proportion (%)
Age (years)	< 25	16	6.6
	25–34	7	30.7
	35–44	78	32.4
	> 45	73	30.3
HCWs status	Non police officers	81	33.6
	Police Officers	160	66.4
Sex	Female	131	54.4
	Male	110	45.6
Marital Status	Single	74	30.7
	Married/Cohabiting	155	64,3
	Divorced/Widowed	12	4.9
Reported Recent alcohol use	Yes	83	11.6
	No	158	88.4
Reported Chronic Illness	Yes	28	11.6
	No	213	88.4
Designation	Doctor	65	26.9
	Pharmacist	14	5.8
	Lab - Technicians	16	6.6
	Nurses and others	146	60.6
Employment Type	Permanent	126	52.3
	Contract	115	47.7
Work Experience (years)	< 5	66	7.4
	5–14	106	44.0
	> 15	69	28.6
Place of residence	Free government residence	163	67.6
	Private rented residence	78	32.4
Job satisfaction	Satisfied	137	56.9
	Dissatisfied	104	43.2

Factors associated with mental distress among healthcare workers

In the final multivariable analysis model mental distress was independent associated with HCWs reported reside in the government houses (adjusted OR = 2.31; 95% CI: 1.07–4.98) and those reported being dissatisfied with their jobs were over six times more likely to report mental distress compared with those who were satisfied (adjusted OR = 6.57; 95% CI: 3.22–13.45) (Table 2).

Table 2
Factors associated with mental distress among healthcare workers at Kilwa Road Police Regional Referral Hospital in Dar es Salaam, Tanzania (2024)

Variable	Mental distress status Distress(N = 136)	Bivariable Analysis Crude OR (95% CI)	P-value	Multivariable Analysis aOR (95% CI)	P-value
Participants Occupation					
Police officers	86 (53.8%)	0.72 (0.41 – 0.24)	0.24	1.08 (0.52–2.24)	0.83
Non police officers	50 (61.7%)	Reference		Reference	
AgeCategorization(years)					
Between 25 to 34	38 (51.3%)	0.35 (0.10–1.19)	0.09	0.30 (0.07–1.26)	0.1
Between 35 to 44	43 (55.1%)	0.41 (0.12–1.38)	0.15	0.42 (0.11–1.74)	0.24
Above 44	43 (58.9%)	0.48 (0.14–1.62)	0.24	0.42 (0.10–1.73)	0.23
Less than 25	12 (75%)	Reference		Reference	
Sex					
Female	82 (62.6%)	1.73 (1.03–2.90)	0.04*	1.79 (0.84–3.82)	0.13
Male	54 (49.1%)	Reference		Reference	
Marital Status					
Married/Cohabiting	89 (57.4%)	1.35 (0.77–2.35)	0.29	1.54 (0.58–4.04)	0.378
Divorced/Widowed	10 (83.3%)	5 (1.02–24.39)	0.04	1.92 (0.22–16.48)	0.55
Single	37 (50%)	Reference			
Recent alcohol Use					
Yes	59 (71.1%)	2.59 (1.46–4.56)	0.001*	1.86 (0.91–3.81)	0.09
No	77 (48.7%)	Reference		Reference	
Chronic Illness Status					
Yes	22 (77.6%)	3.18 (1.24–8.16)	0.02*	2.22 (0.69–7.16)	0.18
No	114 (53.5%)	Reference		Reference	
Work Designation					
Doctor	39 (60%)	2 (0.62–6.43)	0.24	1.94 (0.42–9.06)	0.4
Laboratory Technician	10 (62.5%)	2.22 (0.51–9.61)	0.28	3.32 (0.52–21.33)	0.21
Nurses and Others	81 (55.5%)	1.66 (0.54–5.03)	0.37	1.87 (0.47–7.39)	0.38
Pharmacist	6(42.9%)	Reference		Reference	
Employment Type					
Permanent	79 (62.7%)	1.71(1.02–2.86)	0.04*	1.57 (0.73–3.37)	0.25
Contract	57 (49.6%)	Reference		Reference	
Work Experience (years)					
More than 15	21 (30.4%)	3.52 (1.73–7.16)	0.001*	2.52 (0.87–7.29)	0.09
Between 5 to 14	44 (41.5%)	2.16 (1.16–4.06)	0.02*	1.39 (0.59–3.277)	0.45
Less than 5	40 (60.6%)	Reference		Reference	
Place of residence					
Government residence	82 (78.9%)	5.73 (3.20–10.2)	0.03*	2.31 (1.07–4.98)	0.03*
Private residence	54 (39.4%)	Reference		Reference	
Job satisfaction					
Dissatisfied	82 (78.9%)	5.73 (3.20–10.2)	< 0.001*	6.57 (3.22–13.45)	< 0.001*
Satisfied	54 (39.4%)	Reference		Reference	
*; significant association with mental distress (p value < 0.05), OR; Odd ratio, aOR; Adjusted Odd ratio, CI; Confidence Interval					

Discussion

The study revealed that more than one in every two HCWs at the Kilwa Road Police Hospital screened positive for mental distress; therefore, the finding suggests that mental distress is common and an important occupational and public health concern that requires interventions. The prevalence of mental distress found in this study could be attributed to occupational and psychosocial factors that are commonly experienced by HCWs, which may contribute to HCWs' stressors [1,3]. These factors may include insufficient working conditions, such as high patient loads relative to staff numbers, long working hours, and emotional demands of patient care [2–3]. Moreover, studies have indicated that these challenges may be particularly pronounced in resource-constrained health systems, where healthcare workers often face competing clinical responsibilities and limited supportive working infrastructure [25–26]. The prevalence in this study is higher than the pooled prevalence reported in the global systematic review and meta-analysis and in Sub-Saharan Africa [4, 6]. Also, from individual studies conducted in other sub-Saharan African countries [7–10]. The difference could be accounted for by differences in the screening instrument, its outcome definitions, and healthcare settings. The SRQ-20 used in the current study is a screening instrument for common mental disorders that assesses a broad range of psychological and somatic symptoms. Therefore, it captures a wider spectrum of mental distress than instruments designed to screen for a single disorder, such as depression or anxiety alone [27–28]. Within the Tanzanian context, the prevalence of mental distress observed in this study aligns with a previous study that reported the prevalence of burnout among HCWs [11]. It is acknowledged that burnout and mental distress are interconnected, and HCWs who experience chronic work-related burnout are more likely to report psychological distress. This could be because persistent work-related stress may deplete HCWs' emotional and cognitive resources, reducing their ability to cope with workplace and individual needs [6, 29]. Reflecting a previous study conducted in primary healthcare [6], which reported that burnout was common and was associated with workplace stressors that are also known predictors of mental distress, this may suggest that common mental health conditions exist across different healthcare settings in Tanzania. Moreover, this finding may continue to reflect the World Health Organization's report, which recognizes that mental health conditions are common among healthcare workers globally [1].

In the present study, HCWs residing in government-provided housing had significantly higher odds of experiencing mental distress than those living in privately rented accommodation. We acknowledge that there are limited studies in sub-Saharan Africa that have examined the relationship between government-provided housing and mental distress among HCWs. However, this finding may reflect the influence of housing as an important social determinant of mental health [30–32]. In many resource-limited settings, government-provided housing is often located within or near healthcare facilities. It may expose staff to continuous work-related demands, frequent emergency call-backs, and limited opportunities for psychological detachment from Work [30]. In addition, institutional housing may be characterized by overcrowding, inadequate privacy, poor maintenance, and restricted autonomy over the living environment, all of which could be associated with poorer mental well-being [31]. Furthermore, Government-provided accommodation may reflect differences in socioeconomic position or employment grade in some public-sector settings. Financial hardship and lower socioeconomic status are among the determinants of poor mental health and may therefore partly explain the higher odds of mental distress observed among healthcare workers residing in institutional housing [32].

This study found that HCWs who reported not being satisfied with their job were more likely to report mental distress. The possible reasons could be that, in a study setting, some staff perform dual roles as medical personnel and law enforcers; this could contribute to them experiencing physical fatigue, often resulting from excessive workloads, prolonged working hours, staff shortages, and shift schedules [1, 3]; therefore, it could lead them to be dissatisfied with their job. These findings reflected previous systematic review studies globally and from sub-Saharan Africa, which reported that HCWs with lower job satisfaction are more likely to experience emotional exhaustion and adverse mental health outcomes, including psychological distress [29, 33]. The finding is in keeping with a previous study in Tanzania that reported HCWs who are dissatisfied with their work environment, remuneration, career progression opportunities, or organizational support are more likely to experience mental distress and burnout [6].

In addition to that, an association between job dissatisfaction and mental distress could also be because some of the healthcare service-related factors have been found to contribute to HCWs being dissatisfied with their job. These include insufficient working environments, such as a high patient load relative to staff numbers, and insufficient organizational support [33]. Therefore, this finding continues to highlight the relationship between workplace satisfaction and HCWs' well-being.

This study's findings should be interpreted in light of some limitations. This study is based on self-reported data, which may lead to social desirability and recall bias. Therefore, participants could lead to underreporting or overreporting of mental distress, job satisfaction, and residence status.

Implications of the study

The findings call for an urgent need to integrate interventions for addressing mental health problems in the workplace. The call is in line with the WHO guidelines on Mental Health at Work [34]. The WHO asks healthcare institutions to implement comprehensive strategies that combine organizational interventions to reduce psychosocial risks with programmes that promote mental well-being and facilitate access to mental health care. Recommended interventions include routine screening for mental health problems, mental health literacy training for healthcare workers and supervisors, stress management and psychosocial support programmes, confidential referral pathways for specialized mental health services, and organizational policies that foster supportive working environments. Such integrated approaches have the potential to reduce psychological distress, improve staff well-being, enhance productivity, and ultimately strengthen the quality and safety of patient care.

Conclusion

Mental distress is common among HCWs at Kilwa Road Police Regional Referral Hospital, and in particular among HCWs who reported not being satisfied with their job and resided in the government-provided residence. Therefore, in line with the WHO Guidelines on Mental Health at Work [34], there is an urgent

need to integrate evidence-based mental health interventions into the Kilwa Road Police Hospital. The WHO guideline recommended integrated interventions, such as screening for mental health problems among HCWs and providing interventions based on needs, while addressing job satisfaction and government-provided residence-related factors at Kilwa Road Police Regional Referral Hospital.

Declarations

Competing interests

The authors declared no competing interests.

Ethical consideration

Ethical approval from the Muhimbili University of Health and Allied Sciences Ethical Review Board (MUHAS), under MUHAS-REC-04-2024-2159, with ref. Number. **DA.282/298/01C/2159**

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Author Contribution

"D.M" Assisted in conceptualization, methodology, data curation, and manuscript drafting, and "I. L" for formal analysis, visualization, and final approval for the manuscript

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Data Availability

All data supporting the findings of this study are available within the paper and its Supplementary Information. The article summarizes all data used to write this paper. if study data is needed, please contact the corresponding author

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