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Prevalence of vulnerability to depression among healthcare workers in Kiambu level 5 Hospital, Kenya

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Abstract

This study aimed to establish the preference of vulnerability to depression among healthcare workers in Kiambu Level 5 Hospital, Kenya. Guided by Basic Psychological Needs theory and self-determination theories, a convergent research approach was adopted, employing both ex post facto research design for quantitative data and phenomenological research design for qualitative data. A total of 146 healthcare workers participated in the study. Quantitative data were collected using questionnaires, while qualitative data were gathered through interview schedules. The results indicated a high prevalence of vulnerability to depression among the participants. Out of 144 healthcare workers who participated in this study, 1.4% reported experiencing normal ups and downs, 22.2% showed mild mood disturbances, 33.3% were classified as having borderline clinical depression, 38.2% experienced moderate depression, and 4.9% were found to be severely depressed. These findings call for immediate action to enhance mental health support for healthcare workers. It is essential to develop and implement targeted interventions that address their psychological needs and foster a healthier work environment. By recognizing and responding to the mental health challenges faced by healthcare workers, stakeholders can facilitate resilience among this crucial workforce, ultimately ensuring better care for patients and a healthier workplace culture.

Keywords: mental health support, healthcare workers, depression, psychological needs, Kiambu Level 5 Hospital

1. Introduction

During the COVID-19 pandemic, Nayak, Sahu, Ramsaroop, Maharaj, Mootoo, Khan, and Extavour (2021) investigated to ascertain whether the variables denoted of anxiety, stress, and depression, are rampant in healthcare personnel and the subsequent risk factors. The target population was HCWs sampled from four essential hospitals in Trinidad and Tobago's Regional Health Authorities. The study included 395 HCWs who were at least 18 years old. According to the findings, 17.97%, 42.28%, and 56.2%, had stress, depression, and

anxiety, respectively. HCWs who interacted with patients who had COVID-19 were less depressed and stressed.

In hospitals serving areas hit by the pandemic, Sophie, Rebecca, Jennifer, Toby, Sheryl, Georgina, Michael and Richard (2020) examined how frequently among medical practitioners common and stress-related mental health issues occur. Studies published prior to 30 March 2020, available in online databases were examined. The predominance of mental disorders was estimated using quantitative synthesis spanning four predefined time frames

19 studies comprised the researcher's criteria. Earlier on, they mostly focused on the SARS pandemic in Asia. Post-traumatic stress symptoms (PTSS) that were clinically proven, as well as common mental cases which were prevalent attracted urgent research attention. In the severe stage, the predictable clinically significant PTSS was 23.4%; during the 12-month timeframe and beyond, it was 11.9%. Acute phase prevalence rates for general psychiatric patients were 34.1%, 6–12 months prevalence rates were 17.9%, and 12–plus prevalence rates were 29.3%. Regarding PTSS and general mental cases during the acute period, there were no differences between medical officers and nurses.

In Nepal, a county located in Asia, Khanal, Devkota, Dahal, Paudel, and Joshi (2020) assessed the impacts of mental health among medical professionals during COVID-19 pandemic in a low resource setting. The study was conducted in 2020 in the duration, 26th April to 12th May. The study involved 475 health care workers and measured depression in relation to anxiety, insomnia and the risk factors of mental health outcomes. The study revealed that 41.9% had anxiety, 37.5% were depressed and 33.9% manifested insomnia symptoms. Stigma among health care workers was highly linked to anxiety, depression and insomnia. Mental health medication history was highly associated with anxiety, depression. Lack of adequate precautionary measures towards healthcare workers wellbeing was highly associated to depression and anxiety occurrence. Among Healthcare professionals nurses were more likely to suffer from anxiety compared to other carders.

In Enugu, South East of Nigeria, Obi, Aniebue, Okonkwo, Okeke and Ugwunna (2015) assessed prevalence of depression among medical professionals at tertiary levels. The results revealed that 14.9% had depression symptoms, whereby 18% were female while 8.7% were male. Lack of good relationship with family and working environment challenges were the leading cause of depression among the respondents. The older population (50-59) among the respondents were the most affected representing 30.4% while the young (20-29) years age group were the list affected 10.8%. In relation to marital status the widowed were the most affected with depression accounting for 22.2%, those married 16.6% while those who were single were least affected 12.9%.

In Addis Abba, Ethiopia, Siyoum, Assfaw, Yitbark, and Tesfaw, (2021) carried out a study on depression among patients admitted in the medical and surgical section. The study revealed that depression prevalence rate was 53.9%. Further analysis established that being female, being single, being widowed, unable to read and write, admission at medical ward, history of mental illness and poor social support were factors significantly associated with depression symptoms.

Youths who were casualties of HIV, from the Kenyan coast were compared to their counterparts who were not infected; in a study by Nyongesa, Mwangi, Kinuthia, Hassan, Koot, Cuijpers, and Abubakar in order

to investigate the rate of spreading, the prevailing risk, and protective measures of common mental diseases. Within the range of September 2019 and November 2018, 819 young persons in the age range of 18 and 24 were enlisted from two counties along Kenya's coast; 407 of them were HIV-positive. In order to determine the correlations between CMDs, logistic regression was used. The findings showed that youths with HIV had a greater prevalence of CMDs than their uninfected peers, with depression symptoms being more common. Risk factors for increased CMDs in the youths in question included negative life experiences, a higher felt stigma associated with HIV, and poor antiretroviral drug adherence.

2. Statement of the Problem

The COVID-19 pandemic has severely impacted the mental health of healthcare workers (HCWs), with numerous studies reporting high prevalence rates of anxiety, stress, and depression among this group. Research in Trinidad and Tobago found that 56.2% of HCWs experienced anxiety, while a study in Nepal reported 37.5% prevalence of depression. These findings underscore a critical issue, as HCWs face significant mental health challenges stemming from their frontline roles during the pandemic. Despite the insights provided by international studies, there is a notable lack of localized research in Kenya, particularly regarding the specific prevalence and contributing factors to depression among HCWs at Kiambu Level 5 Hospital. This study aimed to assess the vulnerability to depression in this context and explore associated sociodemographic and work-related factors, ultimately informing targeted mental health support initiatives to enhance the well-being of HCWs and ensure the quality of healthcare services in the hospital.

3. Methodology

This study employed a quantitative research approach utilizing an ex-post facto design to explore the prevalence of vulnerability to depression among healthcare workers. The location of this research was Kiambu Level 5 Hospital, Kenya. Participants in this study were 144 healthcare workers consisting physicians, clinical officers, nurses, pharmacy technicians, lab technicians, radiology technicians, public health workers, psychologists/social workers, biomedical technologists, and medical record technologists. Beck Depression Inventory (BDI) and Basic Needs Satisfaction in General Scale, originally developed by Chen et al. (2015) were used to measure depression and relatedness satisfaction respectively. This investigation was conducted between 2023 and 2024. Participation in the study was voluntary, with no coercion involved. Respondents were assured of confidentiality and privacy, as they were not required to disclose their names on the instruments.

4. Findings and Discussion

The objective of this study was to determine the prevalence of vulnerability to depression among healthcare workers in Kiambu level 5 Hospital, Kenya. The descriptive analysis results is shown in Table 1.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Normal ups and downs	2	1.4	1.4	1.4
	Mild mood disturbance	32	22.2	22.2	23.6
	Borderline clinica	ıl48	33.3	33.3	56.9
	depression				
	Moderate depression	55	38.2	38.2	95.1
	Severe depression	7	4.9	4.9	100.0
	Total	144	100.0	100.0	

Table 1: Prevalence of Vulnerability to Depression among Healthcare Workers

Table 1 shows the prevalence of vulnerability to depression among health care workers. Among those who participated in the study, 2 (1.4%) were predisposed to normal ups and downs of life, 32 (22.2%) were predisposed to mild mood disturbance, 48 (33.3%) were affected by borderline clinical depression, 55 (38.2%) were experiencing moderate depression and 7 (4.9%) were having severe depression. Cumulatively, those with bordeline clinical depression, moderate depression and severe depression were 110 representing 76.4% of the health care workers who participated in the study. This finding shows that health care workers are silent victims of depression among health care workers in Trinidad and Tobago where Nayak, Sahu, Ramsaroop, Maharaj, Mootoo, Khan, and Extavour (2021) found that 42.28% of the health care workers experienced depression during the COVID-19 pandemic. The results of these two studies are similar even though the prevailing conditions at the time of the studies were different, still underlying conditions were basically the same such as high numbers of patients, lack of enough medical supplies.

A factor analysis was run determine the major concerns health workers have that makes them vulnerable to depression and the results are presented in Table 2.

				Extrac	ction Sum	ns of Squar	edRotati	ion Sums	of Squared
	Initial	Eigenvalu	ies	Loadi	ngs		Loadi	ngs	
		% o	f		% o	f		% o	f
Component	Total	Variance	Cumulative %	6Total	Variance	Cumulative	%Total	Variance	Cumulative %
1	7.482	35.631	35.631	7.482	35.631	35.631	4.011	19.099	19.099
2	1.820	8.665	44.296	1.820	8.665	44.296	3.148	14.991	34.090
3	1.464	6.973	51.269	1.464	6.973	51.269	3.140	14.953	49.043
4	1.205	5.737	57.006	1.205	5.737	57.006	1.543	7.350	56.393
5	1.049	4.994	62.000	1.049	4.994	62.000	1.177	5.607	62.000
6	.977	4.652	66.652						
7	.835	3.975	70.627						
8	.764	3.639	74.265						

Table 2: Factor Analysis on Major Health Concerns of Health Care Workers

9	.710	3.379	77.644			
10	.670	3.190	80.834			
11	.611	2.912	83.746			
12	.561	2.670	86.415			
13	.538	2.560	88.976			
14	.487	2.319	91.295			
15	.410	1.954	93.249			
16	.357	1.700	94.948			
17	.338	1.609	96.557			
18	.269	1.280	97.837			
19	.225	1.073	98.910			
20	.214	1.021	99.930			
21	.015	.070	100.000			
Extraction Method: Principal Component Analysis.						

Key:

- i. Loss of interest in activities/work
- ii. Lack of sleep
- iii. I have lost weight
- iv. Worried about my health
- v. Hopelessness
- vi. Sadness
- vii. Irritability
- viii. I feel Tiredness
 - ix. Lack of concentration
 - x. Loss of appetite
 - xi. I feel like killing my self
- xii. Slowness in activities
- xiii. Feeling that I have Failed
- xiv. I am dissatisfied with my work
- xv. Feeling guilty
- xvi. Feeling like am being punished
- xvii. Feeling disappointed
- xviii. Feeling of crying
 - xix. Difficulty in decision making
 - xx. Unsatisfied with my appearance
 - xxi. Lack of interest in sex

Table 2 presents Initial Eigen values and it shows that only five components have a total Initial Eigen values

exceeding 1. The five components account for 62.000% the variance. The five components are; "lack of sleep", "I have lost weight", "worried about my health" and "hopelessness". These major components highlight the most conscipicuos depression among health care workers at Kiambu Level 5 Hospital.

This finding is consistent with findings in a study in Nepal, where Khanal, Devkota, Dahal, Paudel, and Joshi (2020) found that insomnia was a crucial risk factors of mental health concerns among health care workers. Almost all the participants listed experiencing lack of sleep. Sentiments from participants who were interviewed reflected the same. A male participant noted:

"...most nights I only sleep from midnight. I don't sleep for long...it is as if my system is programmed so...in the morning when I wake up...I still have difficulties waking up..this leaves me sleepy during my morning rounds.. My sleeping patterns are unpredictable...I sleep for less than 5 hours which has affected me...I feel tired most of the time..." (HCW 1)

Losing weight was also notably mentioned by the participants. This was as a result of lack of appetite occassioned by their constant contacts with patients whose conditions affect them too. For instance a male nursing participant said during an interview:

"How can I eat after cleaning those festering wounds? .. the conditions I encounter in the wards are sometimes nauseting ... sometimes I just realise I have not eaten at all for an entire day though I don't feel hungly.." (HCW 2)

Health care worker alover the world have worries over their personal health. This personal worries have contributed to making their work stressful. This finding collaborates the findings of a study by Sophie, Rebecca, Jennifer, Toby, Sheryl, Georgina, Michael and Richard (2020) that examined how frequently among medical practitioners common and stress-related mental health issues occur. This study also found that much of the stress came from the fears health care workers had especially when handling highly communicable diseases. Sentiments from health care workers who particiated in this study highlight the extent this fears have on their mental health. For instance, a female medical officer noted:

"...it is only God's grace that has kept me going..and I thank God that so far I have not been infected with the many dieseases that my patients have.. I have watched my patients dying from cholera, COVID-19...but thankfully I have avoided the infections...my worry is getting infected." (HCW 3)

In this study, feelings of helplessness among health care workers emerged as a contributory factor to depression. These feelings may be as a result of external interactions that highly affect the emphatical emotions of the workers. For example, a social worker noted during an interview:

"some patients have stories of neglect that compound my ethical limits...it is no longer emphaty but sympathy and it makes me guilty of doing nothing to help them...cases of abandonment are many in this hospital....the most hurting is babies abandoned and this affects me so much as I have kids too.." (HCW 4)

A rotated component matrix was done to determine the severity depression symptoms among the participants. This was necessary as depressive symptoms are progressive. The results are presented in Table 3.

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Rotated Component Matrix ^a					
	Compone	ent			
	1	2	3	4	5
Feelings of crying	.757				
Feelings of dissapointment	.714				
Feelings of being punished	.645				
Disatisfaction with phys	ical.628	.462			
appearance					
Loss of appetite	.598		.386		
Feelings of failure	.593		.313		
Disatisfaction with work	.488	.344		.462	
Worried about health		.724			
Decision making difficulties	.393	.644			
Suicidal ideation		.613			
Weight loss		.562	.474		
Sadness	.326	.539			
Hopelessness		.500			475
Irritability	.420	.471		.328	
Lack of sleep			.915		
Loss of interest			.911		
Lack of concentration			.608		
Tiredness	.460		.540		320
Slowness in activities				.746	
Feeling guilty	.446			.553	.365
Lack sex interest		.317			.653
Extraction Method: Principal C	omponent Ar	nalysis.			
Rotation Method: Varimax wit	th Kaiser Nor	malization.			
a. Rotation converged in 7 itera	tions.				

Table 3: Rotated Component Matrix

Key

- Component 1 "Normal ups and downs"
- Component 2 "Mild mood disturbance"
- Component 3 "Borderline clinical depression"
- Component 4 "Moderate depression"
- Component 5 "Severe depression"

Table 3 shows that feelings of crying had a high correlation (.757) with "normal ups and downs" probably due to frustrations of life which sometimes become unbearable. Feelings of dissapointment also strongly correlated

(.714) and feelings of being punished (.645) with normal ups and downs. Disatisfaction withphysical appearance correlated positively at .628 and .462 with normal ups and downs and mild mood disturbance respectively. Loss of appetite is also positively associated (.598) with normal ups and downs and also positively correlates (.386) withborderline clinical depression. Feelings of failure also positively correlates with normal ups and downs (.593) and borderline clinical depression (.313). Dissatisfaction with work positively correlates with normal ups and downs, mild mood disturbance and moderate depression at 0.488, 0.344, and 0.462 respectively. The findings also show that worries about personal health is highly associated with mild mood disturbance at 0.724. Issues to do with decision making was directly responsible for causing normal ups and downs and mild mood disturbance at 0.393 and 0.644 respectively. Suicidal ideation accounted for 0.613 mild mood disturbanceand therefore, it was not a major issue of concern. Wight loss accounted for 0.562 and 0.474 for mild mood disturbance and borderline depression respectively. Sadness also was positively corelated with normal ups and downs and mild mood disturbance at 0.326 and 0.539 respectively. Hopelessness associated positively (.500) with mild mood disturbance and had a negative association (-.475) with severe depression. Feelings of irritability also for normal ups and downs, mild mood didturbance and moderate depression at 0.420, 0.471 and 0.328 respectively. Lack of sleep was positively correlated (.915) with borderline clinical depression. Also loss of interest had a positive correlation (.911) with borderline clinical depression. Lack of concentration also accounted for borderline clinical depression at 0.608. the findings also show that tiredness accounted for normal ups and down, borderline clinical depression and severe depression at 0.460, 0.540 and -0.320 respectively. Slowness in performing activities also was pocitively correlated (.746) with borderline clinical depression. Feelings of guilty also was positvely correlated (.446, .553 & .365) with normal ups and downs. Moderate depression and severe depression respectively. Lack of interest in sex was also positively correlated (.317) with mild mood disturbance and 0.653 with severe depression.

From this study, it emerged that various symptoms were specific with various forms of depression as exemplified by Table 42. Consequently, the study revealed that participants who experienced normal ups and downs had issues associated with emotional distress and had the following major symptoms:

- 1. Feelings of crying
- 2. Feelings of dissapointment
- 3. Feelings of being punished
- 4. Disatisfaction with physical appearance
- 5. Lose of appetite
- 6. Feelings of failure
- 7. Dissatisfaction with work
- 8. Decision making difficulties
- 9. Sadness
- 10. Irritability
- 11. Tiredness
- 12. Feelings of guilty

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From this study, the symptoms of mild mood disturbance exemplified by the participants include:

- 1. Disatisfaction with physical appearance
- 2. Disatisfaction with work
- 3. Worries about personal health
- 4. Decision making difficulties
- 5. Suicidal ideation
- 6. Weight loss
- 7. Sadness
- 8. Hopelessness
- 9. Irritability
- 10. Lack of sexual interest

Borderline clinical depression were associated with fatigue and cognitive difficulties pointing to burnout as a major course. This condition was presented with following symptoms:

- 1. Loss of appetite
- 2. Feelings of failure
- 3. Weight loss
- 4. Lack of sleep
- 5. Loss of interest
- 6. Lack of concentration
- 7. Tiredness

Moderate depression symptoms were associated with slowed activities and cognitive load. The symptoms presented are:

- 1. Disatisfaction with work
- 2. Irritabiity
- 3. Slowness in activities
- 4. Feelings of guilty

In this study, severe depression was associated with aspects of reduced sexual interest and relational or personal dissatisfaction. The symptoms noted were:

- 1. Hopelessness
- 2. Tiredness
- 3. Feelings of guilty
- 4. Lack of sexual interest

5. Conclusion

In conclusion, the study conducted at Kiambu Level 5 Hospital sheds light on the troubling mental health landscape faced by healthcare workers in Kenya. The findings reveal that a substantial portion of these individuals are experiencing varying degrees of vulnerability to depression, highlighting a silent, yet pervasive, struggle within the healthcare profession. Key contributors to their mental health challenges include sleep

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disturbances, concerns about personal health, and feelings of hopelessness. Participant interviews further illuminated the emotional toll of their work, revealing the profound stress and ethical dilemmas they encounter daily.

These insights call for immediate action to enhance mental health support for healthcare workers. It is essential to develop and implement targeted interventions that address their psychological needs and foster a healthier work environment. By recognizing and responding to the mental health challenges faced by healthcare workers, stakeholders can facilitate resilience among this crucial workforce, ultimately ensuring better care for patients and a healthier workplace culture.

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