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Depression and Associated Factors Among Refugees Amidst Covid-19 in Nakivale Refugee Camp in Uganda

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ABSTRACT

The COVID-19 pandemic and health measures to prevent it have unprecedented effects on the mental health of the refugees. However, the situation of refugees in developing countries is unclear. Thus, this study estimated the prevalence of and associated demographic factors during the COVID-19 pandemic. The study employed a cross-sectional survey carried out in June 2020 in which 146 adult refugees from Nakivale settlement camp were randomly selected to fill out a questionnaires-demographics and PHQ9. Results revealed that the majority of respondents were female (53%) and 47% had a depressive disorder. There was no statistical relationship between demographics (gender, age, and marital status) and depressive disorders. In Conclusion, findings indicate that depressive disorders are prevalent among refugees in the Nakivale settlement and it is important to identify refugees affected mentally and given proper treatment.

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Background

The United Nations High Commission for Refugees (UNHCR) Global Trend Report indicates that in 2018, 25.9 million refugees, 3.5 asylum seekers, and 41.3 million internally displaced people have been forced to leave their homes due to armed conflicts and violence [1]. Globally, 9% of the world's displaced people are hosted in Europe, 12% in the Americas, and 84% of the world's refugees live in developing countries [1]. Sub-Saharan Africa hosted about 26% of the world's refugees [2]. Uganda, the third-largest refugee-hosting nation after Turkey (3.7 million), Pakistan (1.4 million) had 1.4 million by 2018 [1]. Many refugees besides suffering from physical injury, they too suffer mental harm [3]. However, little attention has been paid to the mental problems of the refugees.

Forced migrations are characterized by traumatic events for the refugees during migration and after settlement. They are exposed to emotionally shocking stories, images of horror and pain. Besides, they have to adapt to the host countries, different cultures, unemployment, and uncertainty [2]. Earlier studies show that wars and violence are associated with a greater burden of mental problems [4–6]. For instance studies in Nepal and the Middle East showed that the refugee respondents had mental health issues [7]. Similarly, in the Karenni refugees, anxiety and depression levels were 42% and 41% respectively [8]. Refugees may experience multiple mental issues including Post-traumatic Stress Disorder, anxiety disorder mood disorder, and depression [9]. Epidemiological studies on the psychopathology of war survivors depression is one of the most frequent mental health disorders experienced by refugees [10, 11].

Demographics have often been examined as possible predictors for depression in the refugee population but with inconsistent results [12]. Regarding age contradictory results have been produced, some studies reporting no association with depression [13–15], while others revealed a significant relationship between age and depression [16]. A similar study in Mexico among Guatemalan refugees revealed that marital status, gender, and age were related to depression [17]. Marital status and gender were related to depression among Somali refugees in the Melkadida camp [18]. In another study by Bogic and colleagues results showed that depression was more common among females, adults, and singles. There are relatively consistent findings showing high levels of depression among females [19, 20]. However, a study by Haile and Samuel found a higher prevalence rate among males than females in Korean immigrants in Toronto [21].

Depression is a widespread mental problem estimated to affect about 9.8%-67.4% of refugees globally [4], [22]. Systematic reviews and meta-analysis on depression among refugees revealed variations in prevalence rates ranging between 5% and 80% [23]. One systematic review concluded that depression was one of the mental health disorders among refugees with a prevalence rate of 30-40% [24]. A meta-analysis reported the prevalence rate of 25-45% for depression [25]. A study in Cambodian refugees revealed that 52% of the respondents reported depression [26]. In Sub-Saharan Africa, the prevalence rate is 20% for depression in refugees[27]. A study conducted in both southern Sudan and northern Uganda found the prevalence of depression was 48% among south Sudan refugees [28]. In a similar study among urban refugees in Kampala, results showed high levels of depression disproportionately affecting women [29]. Thus the already volatile situation of refugees becomes more traumatic in the face of the COVID-19 pandemic.

The COVID-19 pandemic and the health-related measures to contain it have substantially created high levels of stress all over the world [30, 31]. This unprecedented experience has multifaceted consequences for mental health and psychological wellbeing for the general population and refugees cannot be exceptional. It is now evident that COVID-19 has worsened anxiety in the population leading to mental disorders including depression [31, 32]. Therefore it is important to assess peoples' mental status in this exceptional period. Besides, early identification of the psychological disorder makes psychological interventions more effective.

The mental health status of refugees in Nakivale refugee camp, Uganda during COVID-19 is still unknown. To date, there seems to be no study assessing the prevalence of depression among Nakivale refugees during COVID-19. Besides, although studies have been conducted on demographics (age, gender, and marital status) and depression, the findings are contradictory and there seems to be none among Nakivale refugees. The settlement 109,815 hosts refugees and asylum seekers from the Democratic Republic of Congo, Burundi, Somalia, Eritrea, Rwanda, and Ethiopia [1]. In an attempt to address the gap we examined the burden of depression in refugees settling in in Nakivale refugee camp. We asked: What is the burden of depression among refugees during the COVID-19 pandemic and are the factors associated with depression?

Methods
Participants
We conducted a cross-sectional survey in June 2020. We were allowed one week to collect the data required and also to avoid overcrowding within the camps. We abided by the protocols set by the Ministry of Health Uganda (MoH) to minimize the spread of COVID19. The survey was carried out in the Nakivale refugee settlement camp located in Southwestern Uganda and hosts refugees from Burundi, Rwanda, Somalia, Eritrea, Ethiopia, and the Democratic Republic of Congo. It is one of the largest refugee settlement camps in Uganda. We conveniently sampled 146 participants from the camp that met the eligibility criteria for the study. Participants were included if they were 18 and above, those who were not sick, and those who could speak at least one of the three languages- English, Kiswahili, and Kinyarwanda. Participants were excluded if they were: below 18; were not a refugee; not staying in the camp.

Measures
PHQ-9 is a tool used to screen, diagnose and monitor depressive disorder/depressive symptoms. The tool has 9 items whose scores range from 0 (not at all) to 3 (nearly every day respectively). The 9 items represent the 9 symptoms of depression found in the DSM V [33]. In this study, we did not focus on the 10 question that identifies any subjective impairment. To determine the severity of the symptoms, we added the total of the scores of each item ticked. The categories of severity of symptoms were as follows: minimal depression 1-4; Mild depression 5-9; Moderate depression 10-14; Moderately severe depression 15-19; Severe depression 20-27. To determine the presence of a depressive disorder in a participant, we included any participant who had at least 4 symptoms that scored above 2 (except item 9 in which any tick scoring above 1 was allowed) and either of item 1 or 2 or both had been ticked. We asked questions on the participant's demographic information including the categorized age, gender, and marital status of the participants. The survey questionnaire was administered by the research assistants after being trained by a clinical psychologist on the administration of the questionnaire. The research team followed the standard operating procedure set out by MoH-Uganda and the Uganda National Council of Science and Technology.

Statistical Analysis
We summarised the collected information from the questionnaire in a Microsoft Excel sheet which we later imported to STATA version 14.0 for statistical analysis. The predictor variables were age, gender, and marital status (all categorical) while the outcome variable was depressive disorder (also categorical). We carried descriptive statistics summarizing the variables into frequency and percentages in a table. To determine the relationship, we conducted a bivariate analysis using the Chi-square test of independence and Fischer's exact test (where values were <5 in a square) with statistical significance being $P<0.05$

Results
In this study, the prevalence of depression among refugees in the Nakivale refugee settlement camp during COVID-19 was examined. Results in Table 1 indicate that over 50% (n=77) of the respondents were females and 47.3% (n=69) were males. Furthermore, majority of respondents 31.5% (n=46) were aged between 44 and 59, followed by 29.5% (n= 43) aged between 31 and 44, then 21.2% (n=31) who were aged between 18-30 and lastly 17.8% (n=26) were aged between 60 and above. The results in Table 1 show that the majority of respondents 65.8% (n=96) were married and 34.2% (n=50) were single.

Table 1: Demographics of the Respondents

Variable		Frequency	Percentage
Gender	Male	69	47.3
	Female	77	52.7
Age	18-30	31	21.2
	31-44	43	29.5
	44-59	46	31.5
	60 and above	26	17.8
Marital status	Married	96	65.8
	Single	50	34.2

The occurrence of depressive disorders of the respondents was recorded using PHQ-9. Table 2 reveals that 53% (n=33) of the respondents did not have depression while 47% (n=69) reported depressive disorders with females being the majority 25% (n=36).

Table 2: Depressive Disorders

Depressive disorder	Gender	Frequency	Percentage
No Depressive Disorder	Male	36	25
	Female	41	28
With Depressive Disorder	Total	77	53
	Male	33	22
	Female	36	25
	Total	69	47

Further analysis was conducted to the prevalence of major depressive disorders among the respondents. Table 3 shows that of those who had a depressive disorder, 78.3% (n=54) had severe depression, with female constituting 42% (n=29 and 36.2% (n=26) being male. Also, 17.4% of the respondents with depression, had moderate depression, with again majority being female with 10.1% and 7.2% (n=5).

Table 3: The severity of the depressive Disorders

Gender	Severity of disorder				Total
	Minimal Depression	Mild Depression	Moderate Depression	Severe Depression	
Male	0	3 (4.4%)	5 (7.2%)	25 (36.2%)	33 (47.8)
Female	0	0 (0.0%)	7 (10.2%)	29 (42.0%)	36 (52.2%)
	0	3 (4.4%)	12 (17.4)	54 (78.3%)	69 (100%)

A bivariate analysis was conducted to examine the relationship between demographics and depressive disorders. The level of significance was set at 0.05 Results in Table 4 indicate that there was no statistical relationship between demographics (gender, age, and marital status) and depressive disorders. The gender differences had no statistical differences, the p-value (p=0.897) is greater than the alpha value (p=0.05). Age difference also revealed no statistical differences since the p-value (p=0.755) is higher than the alpha value (p=0.05). Lastly, the differences in marital status had no statistical differences because the p-value (p=0.632) is greater than the alpha value (p=0.05).

Table 4: Bivariate Analysis Showing relation between demographics and Depressive Disorders

Variable		P-value
Gender	Male	0.897
	Female	
Age	18-30	0.755
	31-44	
	44-59	
	60 and above	
Marital status	Married	0.632
	Single	

Discussion

COVID-19 pandemic is one of the most devastating challenging crises for public health in the modern world. Nations and different groups across the globe have suffered from a spike of agonizing psychological outcomes including depression. In this context, the refugees are no exception. Thus this seems to be the first work on the prevalence of depression among refugees following the COVID-19 pandemic. According to the analysis, the prevalence of depression in refugees is 47%, two-thirds (25%) being women. This figure is in the range of study findings conduct in similar populations. In a study by Tamblyn et al., [35] 45% of the respondents were diagnosed with depression. Similar results (44%) were observed among Syrian asylum seekers [35, 36]. However, it was far higher than studies conducted such as among Somali refugees in Melkadida camp (38.3%), Vietnamese refugees in America (20%), and Ethiopian immigrants (9.8%) [18, 21, 37]. In this study, females reported a significantly higher burden of depression compared to males. Most studies globally agree that the burden of depression is higher among women [38]. Nasıroğlu and Çeri (2016b) reported that females were more at risk compared to males.

The results indicate that of those who reported depressive symptoms, 78.2% had severe depression, with females constituting 42%. This prevalence rate is in tandem with the prevalence rate reported in other war-affected refugees such Central Africa,

Middle Eastern, South-Eastern Europe, and Southern Asia [39, 40]. Bandeira and colleagues reported depression in 74% of the refugee respondents [41]. The systematic reviews on depression among refugees' results showed variations in reported prevalence rates between 5 and 80% [42]. The rate of 78.2% however, exceeded the prevalence rates other regions in studies conducted before COVID-19 such as northern Uganda, Kurdistan region of Iraq, Syria, Mexico, and Lebanon ranging between 20 and 60 [11, 17, 43–45]. For example in the study of mahmood et al., [44] the prevalence was 59.4 for depression. The high prevalence of depression among refugees in Nakivale camp may be attributed to the effects of COVID-19 and measures to prevent or mitigate it.

The study indicates that there was no statistical relationship between depression and demographic factors (gender, age and marital status). This may not be a surprising result given that other studies on the topic have revealed contradictory results [12]. Marital status and gender were related to depression among Somali refugees in Melkadida camp [18]. In another study by Bogic et al.,[19] results showed that depression was more common among females, adults and singles. Most studies globally agree that the burden of depression is higher among women (WHO, 2004). Nasıroğlu and Çeri (2016b) reported that females were more at risk compared to males. However, a study Haile and Samuel [21] found a higher prevalence rate among males than females, the results that mirrored those of Noh et al., in Korean immigrants in Toronto [46].

Limitations

The respondents' recruitment was restricted to only refugees who were in the camp, speaking at least one of the three languages-English, Kiswahili and Kinyarwanda. We may not also generalize the findings to all refugees. Besides this was a cross-sectional study with its own limitations thus the causal-effect relationship is not be possible.

Conclusion

COVID-19 pandemic has caused several mental health problems notably depression. The results in this study indicate high levels of depressive disorders among the refugees. Therefore amidst the pandemic, it is important to identify refugees affected mentally and given proper treatment. This study adds to the existing literature on depression by showing evidence of elevated rates of depression during COVID-19. The overall high prevalence of depression in Nakivale refugee settlement camp proves the need for the urgency of screening and treatment of depression among the refugees. The study shows that refugees are susceptible to mental disorder during the COVID-19 pandemic. According to WHO, depression among needs immediate attention and policies to deal with it [1, 47].

Acknowledgement

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