

# Effect of COVID 19 crisis on mental health among young people between 18-35 years in Kenya

## Abstract

**Introduction:** In the height of the COVID-19 pandemic in 2020, the Ministry of Health in Kenya putting in place stringent COVID-19 guidelines to curb the spread of this disease including lockdowns and restrictions to public gatherings disrupting the normal communications, activities and engagements that the young people usually had prior to the pandemic. The COVID-19 crisis also led to an economic downturn further negatively affecting young people. This purpose of this study was to therefore analyze the effect of COVID-19 crisis on mental health among young people between the ages of 18-35 years in Kenya.

**Methods:** Cross-sectional research was carried out in Nairobi Kenya where youth aged 18 to 35 years responded to an online survey. A total of 272 participants completed the questionnaire which included a biodata section and a section aimed at measuring depression using the standardized self-reporting Depression Analysis Tool- PHQ9 and measure resilience using the standardized The Brief Resilience Scale (BRS) and Brief Resilient Coping Scale (BRCS).

**Results:** The findings from the study indicated that COVID-19 contributed to the rising mental health challenges in young people during the pandemic period. In terms of depression, the study found out that that up to 65.9% of the respondents reported having severe to mild depression with the male having more reported depression than their female counterparts. The study also showed that about 61.6% of participants had normal resilience but a significant 29.5% had low resilience in coping with the disrupted state caused by the COVID -19 crisis. The research also found out that just over half of the young people (55.3%) were able to cope with the existing challenges from the pandemic.

**Conclusions and recommendations:** The study demonstrated a strong correlation between the aftermath of the COVID-19 crisis and its effect on mental health of young people. Therefore, the study recommends the development, strengthening and implementation of a mental health preparedness and response strategy for future pandemics and crisis situations.

**Keywords:** COVID-19, mental health, young people, depression, resilience, pandemic

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## Introduction

The World Health Organization (WHO) defines mental health as a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.<sup>1</sup> Globally, one out of every four people suffers from some a mental health condition as they account for the largest percentage of diseases globally.<sup>2</sup> According to WHO, 10-20% of youths globally experience some form of an undiagnosed and/or untreated mental health condition with Africa forming the largest youth population globally. Despite the large youth demographic in Africa experiencing mental health challenges, many governments and health care systems in the continent have not set a priority on mental health.<sup>3</sup>

In Kenya, according to the Kenya Mental Health Policy (2015-2030), mental health challenges are on the rise with statistics indicating that 1 in 4 Kenyans suffer from mental health challenges.<sup>4</sup> Further statistics from the WHO report on mental health indicate that Kenya was among the top ten countries in Africa with high cases of depression estimated to affect approximately 1.9 million people.<sup>5,6</sup> Other frequently reported mental illnesses include are substance induced disorders, Schizophrenia, stress, and anxiety disorders.<sup>7,8</sup> Prior to the COVID-19 pandemic, Kenya was making significant

strides in the mental health space through the development of the draft of The Kenya Mental Health Policy (2015-2030),<sup>9,19</sup> primarily driven by the forming the mental health taskforce.<sup>10</sup> However, this progress slowed down significantly with the rise of the COVID-19 pandemic that saw the government shift its full focus to addressing the pandemic.

The COVID-19 pandemic was declared a pandemic in 2020<sup>14</sup> and was described as a global crisis with significant impact on mental health.<sup>15</sup> During a crisis such as the COVID-19, mental distress is expected to be on the rise.<sup>16</sup> For instance, in 2005, during the Avian flu, the then World Health Organization Director Dr. Lee noted that the mental health state of those affected with the flu was greatly challenged.<sup>17</sup> Similarly, with the COVID-19 pandemic, brought with it a lot of disruption in normal life with lockdowns meaning people could not meet and interact as before, but also the pandemic saw an economic downturn which led to a rise of the cost of living.<sup>18</sup>

With all these challenges, young people faced varied levels of mental health distress including worry, fear, anxiety and the feeling of loneliness. Zhai & Du submit that young people were especially affected by the new measures introduced to curb COVID-19 such as quarantine and curfew which disrupted their normal activities.

The young people felt lonely, isolated, and withdrawn from their way of life and this, according to the study, led to sharp increase in

suicidal behaviors.<sup>14</sup> In another study conducted in Boston by Cromar, it was evident that the youth were at a critical moment of boredom with movement restrictions imposed. This led to the development of negative thoughts and those working found it harder to afford the basic needs as they could not go to work anymore.<sup>20</sup> In another study carried out by the partners to the WHO, it was revealed that the COVID-19 has presented the most difficult time for most youth who are currently in their 20s.<sup>21</sup> Clearly the pandemic had its effect of young people.

It is against this backdrop that this study was conducted with its main objective being to investigate the extent to which the effect of a global health crisis such as the COVID-19 had on the status of mental health of young people between 18-35 years in a bid to provide evidence and recommendations for the need for a designed response and strategy for mental health and psychosocial support during crisis such as the COVID-19.

## Materials and methods

### Study design

The study adopted a cross sectional study design and took a period of 12 weeks between April and June 2020. This study was carried out in Kenya's capital, Nairobi city which at the time of study had the most confirmed cases of COVID-19 in Kenya estimated at 70%<sup>22</sup> and has the highest youth population in the country as well.<sup>23</sup>

The inclusion criteria metrics for the study required that the study participants be youth living in Nairobi City County aged between 18-35 years. They also had to have access to a smart phone and the internet, could read, write, understand, and consented to take part in the study. The study excluded those who were critically ill and reported experiencing any mental health problem.

The study adopted a simple random sampling method to select a sample size of 272 respondents from a database of 3478 youth living in Nairobi. The participants were contacted via short message services (SMS) and received an email with the questionnaire link. All study participants had until the end of the data collection period to respond to the questionnaire. The data collection process was concluded once the required number of responses were collected.

For the study to be able to use the findings and results to make generalization, a confidence level of 95 % was arrived at based on the Fisher et al (1998) formulae of sample size determination.<sup>24</sup> The desired sample size was arrived using the established 20% prevalence of mental ill-health in Nairobi, Kenya (KANCO,2018).

$$n = (z^2 (p-q)) / d^2$$

n = desired sample size.

Z = standard normal deviate usually set at 1.96 which corresponds to 95% confidence interval.

P = prevalence of mental ill-health which is at 20% according to the Kenya Mental Health Policy (2015-2030)<sup>4</sup>

d = degree of accuracy desired which is 5%.

$$n = (1.96^2 (0.2*0.8)) / 0.05^2 = 248$$

To cater for the non-responsive rate, 10% of the desired sample size was added.

$$10/100 * 248 = 0.1 * 248$$

$$= 24.6$$

$$248 + 24.6 = 271.6$$

272 respondents

Fisher *et al* (1998) formula for sample size determination was used as it allowed the study to determine the non-random association between the categorical variables in this study.<sup>26</sup>

### Study methods

The study adopted the use of online questionnaire because administering the questionnaire in person was not practicable due to mobility restrictions and social distancing guidelines from the government to curb the spread of COVID-19. The questionnaire was sent to the target audience through WhatsApp and SMS, and where it was not possible to reach them, the questionnaire was sent to them via email. This questionnaire was developed using Google Forms and contained 5 major sections; the informed consent and the biodata, the mental health status analysis questions, resilience during COVID-19 questions, effect of COVID-19 on mental health questions and lastly questions on the impact of sources of information on COVID-19.

The data collection tool was adopted from globally approved data collection tools including the Depression Analysis Tool developed by Kroenke K and his research team which have become a global standard tool for measuring depression;<sup>25</sup> The Brief Resilience Scale developed by Smith<sup>26</sup> was used in part two of the questionnaire; and the standardized Brief Resilient Coping Scale developed by Sinclair (2004) which was adapted for part three of the questionnaire.<sup>27</sup>

To ensure the validity and reliability of the study, relevant literature was reviewed, and the questionnaire developed as per the study objectives. To ensure reliability, the questionnaire was pre-tested on 20 respondents in Nairobi City County. These respondents did not participate in the actual study.

Data was collected using online questionnaires for a period of 12 weeks. Participants were required to respond within a week of receiving the questionnaire and they received reminders after every 4 days throughout the 6 weeks allocated for data collection. This was an ample time to reach the desired sample size.

### Data analysis

Quantitative data was coded using Microsoft excel then analyzed using the Statistical Package for Social Sciences (SPSS version 25). Summary was done using descriptive statistics (percentages) presented through graphs, pie chart and tables. Qualitative variables were analyzed and interpreted using global standard tools as follows: depression levels were analyzed using the Depression Analysis Tool PHQ-9<sup>25</sup> where several questions in the tool were scored from 0-27 points. These were interpreted as follows 0-4 None-minimal depression, 5-9 Mild depression, 10-14 Moderate depression, 15-19 Moderately Severe depression and 20-27 representing Severe depression. Resilience was analyzed using the Brief Resilience Scale<sup>26</sup> where questions were ranked from 1-5 points and interpreted as: 1.00-2.99 Low resilience, 3.00-4.30 Normal resilience, 4.31-5.00 representing High resilience.

Finally, the ability to cope was analyzed using the Brief Resilient Coping Scale<sup>27</sup> where questions are scored and the total sum scores range from 4 to 20. Scores of 4-13 show low resilient coping, 14-16 show medium resilient coping and 17-20 show high resilient coping. Test of associations and correlation was done. Inferential analysis entailed both correlation and regression analysis to establish the magnitude of relationship between criterion and predictor variables.

## Logical and ethical considerations

The study received approval from Kenyatta University after the ethical consideration were thoroughly reviewed. Participation in this study was voluntary. A consent form clearly explaining the study purpose, objectives, importance, and potential risks of participation in the study preceded the questionnaire. Potential participants could only fill the questionnaire after reading and agreeing, by checking a box on the informed consent form. Confidentiality of the subjects was protected and maintained during the study as the questionnaires did not have any personal identifiers.

## Results

A total of 272 respondents participated in the study with the mean age of the respondents being 24 years. The youngest respondent was 18 years and the oldest was 34 years. 155 of the participants (55.1%) were male and 122 respondents representing 44.9% were female.

### Perceived effect of COVID-19 crisis on mental health

191 respondents representing 70.2% agreed that their current state of mental health could be attributed to the COVID-19 crisis while only 81 respondents (29.8%) indicating that COVID-19 crisis did not contribute to their current mental health status. The top three ways in which COVID-19 had affected the respondents include anxiety at 55.9%, fear at 47.8% and lack of focus at 40.4%. The data is illustrated in Figure 1 below:

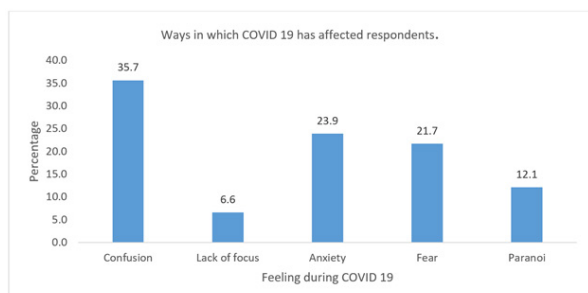


Figure 1 COVID-19 effect on respondents' mental health state.

Source: Research Data, 2020

A majority (60.9%) of the study participants indicated feeling hopeless and depressed, with 14% (38) reporting feeling depressed almost every day. 14.7% of the study participants also indicated that they had experienced suicidal and self-harm thoughts in the past two weeks preceding the survey as shown in Table 1 below:

Table 1 Suicidal and self-harm thoughts and feeling down, depressed, or hopeless

	Suicidal and self-harm frequency	Feeling down, depressed or hopeless frequency
Not at all	85.30%	37%
Several days	8.50%	35.70%
More than half of the day	3.30%	10.70%
Nearly everyday	2.90%	14.00%

Source: Research Data, 2020

### Depression analysis

When it came to measuring the overall depression levels in the respondents, the data was analyzed using the PHQ-9 depression

analysis tool<sup>25</sup> and scored for each individual. The overall findings indicated that only 34% of the study respondents did not experience depression with over 51% of the respondents experiencing mild and moderate depression. Additionally, a significant 14% of the respondents experienced severe forms of depression during the pandemic as indicated in the Table 2 below:

Table 2 Depression levels

Total score	Interpretation	Number of participants with this score	Percentage
0-4	Minimal depression	92	34.10%
5-9	Mild depression	73	26.90%
10-14	Moderate depression	67	24.70%
15-19	Moderately severe depression	24	8.80%
20-27	Severe depression	15	5.50%
Total		271	100

Source: Research Data, 2020

### Resilience during COVID-19

To measure the resilience of the respondents during COVID-19, the Brief Resilience Scale<sup>26</sup> was used to collect and calculate the resilience for each of the respondents. The study found that 167 respondents representing 61.6% of the respondents had normal resilience with 80 respondents representing 29.5% having low resilience. This is summarized in the Table 3 below:

Table 3 Resilience levels

Brief resilience scale score	Interpretation	Number of participants with this score	Percentage
.00 - 2.99	Low resilience	80	29.50%
3.00 - 4.30	Normal resilience	167	61.60%
4.31 - 5.00	High resilience	24	8.90%
Total		271	100%

Source: Research Data, 2020

### Coping with the challenges during COVID-19 pandemic

In order to examine the participants ability to cope with the challenges and disruptions brought about by COVID-19 pandemic, the study used the Brief Resilient Coping Scale<sup>27</sup> to collect and analyze the data. The results indicated that 150 respondents (55.3%) had a high ability to cope with the challenges with only 16.2% representing 44 respondents having low ability to cope with challenges. This is indicated in the Table 4 below.

## Discussion

### Main findings of the present study

The study found out that COVID-19 contributed significantly to the rising cases of mental health challenges among young people aged 18-35 years old. The study found put that COVID-19 pandemic and its effects had contributed to the poor state of mental health among 70.2% of the study participants with the top 3 ways in which

COVID-19 had affected the respondents including inducing anxiety (55.9%), fear (47.8%) and lack of focus (40.4%). A majority (60.9%) of the study participants indicated feeling hopeless and depressed in light of the COVID-19 pandemic and its implications on their day to day life with a significant 14.7% of the study participants indicating that they had experienced suicidal and self-harm thoughts in the past two weeks preceding the survey.

**Table 4** Ability to cope with challenges

Brief resilient coping scale score	Interpretation	Number of participants with this score	Percentage
4-13	Low coping ability	44	16.20%
14-16	Medium coping ability	78	28.50%
17-20	High coping ability	150	55.30%
Total		272	100%

**Source:** Research Data, 2020

The study analyzed the depression levels of the study participants based on the PHQ-9 depression analysis tool and the overall findings indicated that only 34% of the study respondents did not experience depression with over 51% of the respondents experiencing mild and moderate depression. The study also analyzed how resilient the participants were using the Brief Resilience Scale and found out that 167 respondents representing 61.6% of the respondents had normal resilience and could quickly recover from the negative effects of the COVID-19 pandemic on their lives. Finally in order to find out the participants ability to cope with their current predicaments, the study used the Brief Resilient Coping Scale and the results indicated that 150 respondents (55.3%) had a high ability to cope. The study findings indicated that whilst COVID-19 had a significant negative effect of the study participants including contributing to their depression, anxiety, fear and even suicidal thoughts, the study participants were resilient enough to quickly recover from the negative effects of the COVID-19 pandemic and that they had the strength to cope with the current predicaments brought about by COVID-19.

### Comparison with other studies

The study found out that only 34 % of the study participants did not experience depression with the rest of the participants expressing mild to severe depression especially after two weeks of the lockdown and COVID-19 crisis. These findings are consistent with feedback given by the Ministry of Health, Kenya which revealed that introducing COVID-19 measures is like to lead to increase in mental health issues across the country.<sup>33</sup> This present study reported that high levels of depression are attributed to the COVID-19 crisis and the lockdown effect. This is finding is consistent with research done by Varshney et al., which indicated that young people were mentally affected by COVID-19 crisis.<sup>28</sup>

The research also found out that 70.2% of the respondents agreed that their current state of mental health was attributed to the COVID-19 crisis while only 29.8% indicating that COVID-19 crisis did not contribute to their current mental health status. Liang et al., (2020) submit that mental health status of young people could be attributed to the COVID-19 crisis.<sup>29</sup> This study also found out that the top three ways in which COVID-19 had affected the respondent's included anxiety at 55.9%, fear at 47.8% and lack of focus at 40.4%. This study also discovered that 61.6% of the respondents had normal

resilience despite the crisis with only 29.5% having low resilience. The argument of the researchers is that this is due to the fact that the African youth under normal circumstances has been exposed to many stressors and as a result have become quite resilient so that even with the COVID-19 crisis, the hopes for a better future ensured that the youth continued to be resilient. This argument concurs with previous epidemiological studies<sup>30</sup> that indicated the same results and argument.

This study also found that despite COVID-19 affecting the mental health status of young people, 55.3% of the respondents were high resilient coppers with only 16.2% of the respondents being low resilient coppers. The study found that a majority of young people devised creative ways to deal with depression and anxiety caused by COVID-19. The data showed that only 14 % of the respondents did not find creative ways to alter their situations and cope. This is consistent with epidemiological studies done by Xu & He, (2021) which indicated that young people often found coping strategies to deal with depression during crisis.<sup>31</sup>

### Implication and explanation of findings

The findings of this study clearly indicate that crisis such as covid-19 pandemic have a negative implication on young people's mental health and there is a strong need for a mental health emergency preparedness plan for governments to ensure that populations are prepared and covered when crisis such as covid-19 pandemics strike. Such strategies could ensure that the populations are well prepared for emergencies and can cope better and be less affected by the crisis when it occurs. This in in line with the World Health Organizations recommendations to for better preparedness during crisis situations.<sup>34</sup>

### Strengths and limitations

The study's strongest attributes were the fact that the study was able to quickly help in analyzing the effect of the COVID-19 crisis by leveraging on technology to collect data and analyze it in a period where traditional data collection methods could not work. The contributions of this study will ensure that there is more evidence to rally the local governments to prioritize mental health preparedness during a crisis and institutionalize it to prepare and cover populations during such future crisis. The study also had its limitations where the study participants had to have a smart phone and internet access which could have potentially introduce have a selection bias. However, given that majority of youth (90%) in urban areas have access to a smart phone and internet,<sup>32</sup> selection bias was negligible. The other potential limitation of the study was the fact that this was a descriptive study and as such attribution of mental health status to the COVID-19 crisis was as perceived and self-reported by the respondents.

### Conclusion and recommendations

Crisis situations such as COVID-19 that disrupt the normal livelihoods of individuals clearly have an impact on the individual's mental health status. This study highlighted how the young people in Nairobi County, Kenya, were impacted by the COVID-19 restrictions imposed by the government. In keeping with the findings of this study, there is a growing body of need for governments, not only in Kenya, but across the world, to implement and enhance mental health preparedness and response efforts to help young people adopt proper coping strategies during COVID-19 crisis and any other future pandemic.

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## Conflicts of interest

The author declares there is no conflict of interest.

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