Original Research Article

Mental Health Effects of COVID 19 Pandemic on Learners in Primary and Secondary Schools in Kenya

ABSTRACT

Aims: To assess the effect of COVID -19 on mental health of the learners in primary and secondary schools of Kenya.

Study design: The study adopted a cross-sectional research design where 96.5% of the respondents of the study were between the age of 6- 18 years.

Place and Duration of the study: The study was conducted in Kenya and it involved five counties namely Nairobi, Mombasa, Kajiado, Migori and Elgeyo Marakwet primary, secondary and special schools. The study was conducted between October 2021 and July, 2022.

Methodology: In the five selected counties, 12 schools spread across the different sub-counties were selected. A 31 item questionnaire for learners on mental health was administered to assess levels for anxiety, depression and post-traumatic stress disorder. Once the questionnaires were returned the mental health tool was scored as follows: Normal (1), Mild (2), Moderate (3) and Severe (4) though some items were reverse scored if the statement was negatively phrased. All the learners who scored moderate to severe in this tool were identified as vulnerable and predisposed to risks of mental health illness ~~and~~ thus were recommended for mental health interventions.

Results: The study established that COVID-19 heightened the levels of anxiety, depression and Post traumatic stress disorder (PTSD) among learners in primary, secondary and special schools in Kenya.

Conclusion: COVID-19 negatively affected the mental health of learners. Consequently, **t**he study recommends mental health programmes to be put in place in all Kenyan schools not only to prevent but manage learners exhibiting the mental health symptoms that affect their lives negatively. This will lead to holistic growth with fully functional citizenry.

Keywords*: Anxiety, COVID-19, Depression, Effects, Mental Health, PTSD*

1. Introduction

Globally, the COVID-19 pandemic has already led to major increases in unemployment and is expected to lead to unprecedented increases in poverty as well as poor physical and mental health. From the month of March, 2020, the COVID-19 pandemic hit Kenya. As the pandemic curve showed increased infections, there was heightened trauma, anxiety, worry, frustration and stress due to the uncertainty and the feeling of lack of control. During the pandemic, there were home restrictions where children were not encouraged to have any public activities including play. Although these

stringent measures were put in place to quell the outbreak and ensure children's safety [1] noted that it may have diminished the resilience of family and children, and may have heightened the possibility for adverse reactions, like depression and anxiety symptoms. During the COVID-19 outbreak, there was evidence of an increased domestic violence [2]. [3] notes that children often experience psychological stress following natural disasters and other crises. During time of crisis, children suffer fear, loss and grief after experiencing sickness or the loss of friends or family members [4]. It is estimated that 10 to 20 percent of children and adolescents around the world suffered from mental disorders before the COVID-19 pandemic [6]. Also, the social and economic disruptions that accompany a pandemic or a disaster will likely increase stress within the family and lead to mental disorders such as Post traumatic stress disorder (PTSD), anxiety and depression, among children and youth [8]. Mental health is described by [7] as an integral part of an individual's general wellbeing. [7] further says that having good mental health means that the individual is able to connect, function, cope, thrive and that mental health exists in a continuum with experiences ranging from optimal state of wellbeing to debilitating state of great suffering and emotional pain.

Prolonged stress can impair learners' learning and threaten their future development. According to [9], Post Traumatic Stress Disorder, depressions and bereavement lead to high risk of suicidal crisis and self-harm behaviours. COVID-19 has affected more than 1.5 billion learners worldwide including more than 18 million in Kenya. The closure of schools and uncertainty of term dates have left children susceptible to physical, emotional and sexual abuse while others have limited food supply due to job and business losses. To achieve quality education as the world adjusts to the impact of COVID -19, there is need for an urgent interventions that will counterbalance the negative mental health impact of the pandemic [9]. Schools are in a better position to positively intervene for learners experiencing high levels of the effects of COVID -19 on mental health wellbeing. through informational content centred around healthy lifestyles, importance of getting adequate sleep, promoting physical health and fitness, creating awareness about moral and wellness principles all which are essential for effective learning. As much as a lot had been done to control and manage the physical health effects posed by the pandemic there was little effort put on the mental health effects of COVID-19 and the support systems required to mitigate the effects of COVID -19 pandemic among learners. It is important for the country to have adaptable, effective, sustainable mental intervention measures for managing COVID -19 pandemic. Therefore, there was need to conduct empirical research to assess the effects of COVID-

19 on mental health of learners. Based on the assessment data, the interventions can be provided for learners to enable them capture their learning experiences, enhance emotional and social intelligence.

2. Methodology

The study sampled 60 schools drawn from five (5) counties in Kenya namely: Mombasa, Nairobi, Migori, Elgeyo Marakwet and Kajiado. In each county, 12 schools spread across the different sub-counties were selected. The schools were five (5) secondary schools, five(5) primary schools and two(2) special schools where one(1) was a secondary school and the orher a primary special school. A questionnaire was used to collect data. The questionnaire was preferred because it has a wider coverage and offer greater assurance of anonymity. Therefore, the questionnaire elicited candid and more objective responses, in terms of feelings, beliefs, experiences, perceptions, and attitudes of the learners [10]. A 31 item questionnaire on mental health was administered to assess symptoms levels for anxiety, depression and post-traumatic stress disorder. The questionnaire was divided into three sections: Anxiety section had 10 items, Depression section had 11 items and PTSD section had 10 items. A total of 2685 learners responded to the questionnaire. The items were adapted and modified from the[11], Diagnostic and Statistical Manual of Mental Disorders (DSM -5), Beck's Anxiety inventory, Hospital Depression and Anxiety Inventory (HAD) inventory, Trauma Exposure check list and also literature review on the same. Once the questionnaires were returned the mental health tool was scored as follows: Normal (1), Mild (2), Moderate (3) and Severe (4) though some items were reverse scored if the statement was negatively phrased. All the learners who scored moderate to severe in this tool were identified as vulnerable and predisposed to risks of mental health illness and were recommended for mental health interventions and prevention programs.

3. Results and Discussion

This section presents the results of the study and discussions under the following subheadings; Anxiety, Depression and PTSD levels among learners in primary, secondary and special schools in the five selected counties.

3.1 Anxiety

To assess for the symptoms of anxiety in learners, the study identified the following subjective feeling of learners; worry, sleep problems, bad dreams, struggle with the ability to concentrate, feelings of loneliness, easily forgetting, feeling uneasy, easily getting tired, having the fear of death and the fear that their basic needs will not be met. The learners were expected to rate their feelings as "All the time", " Sometime " or "Not at all". The results are as shown in Figure 1.

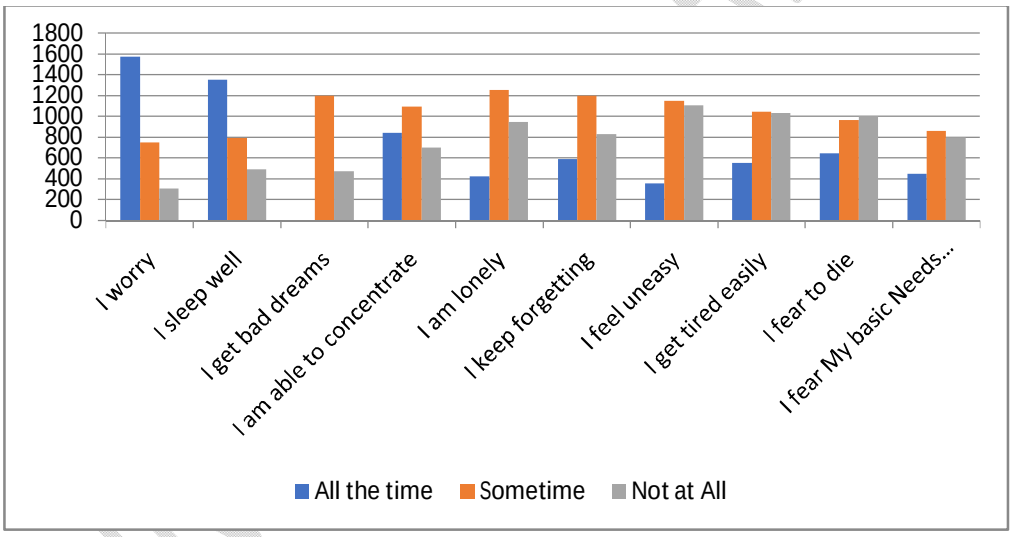

Figure 1 Learners' responses on Anxiety symptoms

The results show that learners worry all the time while on the other symptoms, a substantial number of learners were reported. Figure 1 shows all the responses on every item as given by the participants. Worry is one of the major symptoms of anxiety and this means COVID-19 caused anxiety among learners due to uncertainty it posed to their lives.

3.1.1 Learners Anxiety based on the Sampled Counties

The study sought to establish anxiety levels among learners in the sampled counties and he results are as shown in Table 1.

Table 1. Learners anxiety symptoms per County

			Anxiety				
			Normal	Mild	Moderate	Severe	Total
County	Kajiado	Count	105	368	64	0	537
		%	19.60%	68.50%	11.90%	0.00%	100.00%
	Migori	Count	80	316	146	10	552
		%	14.50%	57.20%	26.40%	1.80%	100.00%
	Mombasa	Count	58	361	157	9	585
		%	9.90%	61.70%	26.83%	1.50%	100.00%
	Nairobi	Count	92	230	141	6	469
			19.60%	49.00%	30.10%	1.30%	100.00%
	Elgeyo Marakwet	Count	79	302	137	17	535
		%	14.80%	56.40%	25.60%	3.20%	100.00%
Total	Count		414	1577	645	42	2678
	%		15.50%	58.90%	24.10%	1.60%	100.00%

Source; Field data

From Table 1, shows that learners generally experienced anxiety, however, Mombasa County with 166 of learners reporting moderate to severe levels of anxiety while Kajiado county had the least number of learners 64 (11.9%) reporting moderate to severe levels of anxiety. From the five counties sampled the total number of learners experiencing moderate to severe levels of anxiety were 687 (25.7%). This is more than ¼ th of the total population sampled by the study. This shows that anxiety affects learners across the board whether in the rural or urban parts of the Country. A cross-tabulation between counties on anxiety level of learners was done using chi-square statistics. The results showed there is statistical significance (2 = 103.819, $p < .05$) between counties and the learners' levels of anxiety due to COVID-19. Though all learners in all counties experienced anxiety, more learners in Nairobi county were affected due to the fact that most cases of COVID-19 were in Mombasa was hard hit by the pandemic in Kenya.

3.1.2 Anxiety and Learners Gender

The study sought to establish the level of anxiety based on learners gender as shown in Figure 2.

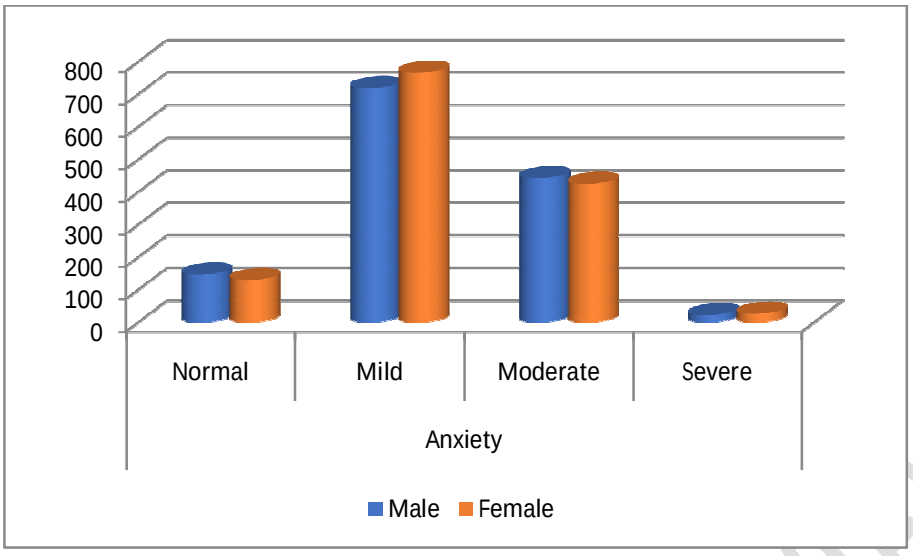

Figure 2. Anxiety and learners gender

The results on anxiety and gender revealed that 466 males experienced moderate to severe levels of anxiety while 449 of the females learners did the same. This clearly indicates that both genders experienced anxiety more or less the same. A cross-tabulation between gender and anxiety levels among learners was done using chi-square statistics and the results showed no statistical significance (2 = 3.038, p > .05) between gender of learners and levels of anxiety due to COVID-19. Therefore gender had no effect on the anxiety levels among learners both in primary, secondary and special schools in Kenya.

3.1.3 Learners' Anxiety in Relation to School Category

A cross tabulation of anxiety and the school categories was done and the results are as presented in Table 2. Results as shown in Table 2 indicates that 419 (35.7%) of learners in primary schools had moderate to severe levels of anxiety, in secondary schools learners experiencing moderate to severe levels of anxiety were 462(32.3%) and in the special schools learners with moderate to severe levels of anxiety were 36(47.4%).

Table 2. Learners' Anxiety and school category

Crosstab							
			Anxiety				Total
			Normal	Mild	Moderate	Severe	
School;	Primary	Count	118	634	408	11	1171

Primary, Secondary and Special		**% within**	**10.10%**	**54.10%**	**34.80%**	**0.90%**	**100.00%**
	Secondary	**Count**	**147**	**822**	**432**	**30**	**1431**
		% within	**10.30%**	**57.40%**	**30.20%**	**2.10%**	**100.00%**
	Special	**Count**	**9**	**31**	**31**	**5**	**76**
		% within	**11.80%**	**40.80%**	**40.80%**	**6.60%**	**100.00%**
Total		**Count**	**274**	**1487**	**871**	**46**	**2678**
		% within	**10.20%**	**55.50%**	**32.50%**	**1.70%**	**100.00%**

Source; Field data

The results in Table 2 shows that levels of anxiety in both the primary and secondary school learners are almost at par but there are slight differences in special schools which can be accounted for due to pre-existing situations in the special schools that may have been aggravated by COVID-19. This concurs with a study done by [12] noted that Children with special needs usually face extra challenges because many encounter significantly higher chances of neglect, abuse, segregation leading to loneliness. A Chi-square test to establish anxiety and school category was done and the results based on a cross-tabulation between school categories (primary, secondary and special) showed a statistical significance ($\chi^2 = 26.257$, $p < .05$) between school categories and the learners' levels of anxiety due to COVID-19. Anxiety makes a person feel: overwhelmed, worried, and stressed. It can suck the energy (and life) out of an individual faster than just about anything else. And it can become a cycle of thoughts, panic and anxiety. This agrees with the findings of a study done by [13] who said that there is a large body of evidence that shows that social support plays a beneficial role in mental health, the bivariate correlations in their study showed that less social support was correlated with more anxiety.

3.2 Depression among Learners

To assess levels of depression in learners the study used an eleven(11) item tool that the learners responded to either "All the time", Sometime" or "Not at all". The results for each of the items were tabulated and summarized as shown in Figure 3;

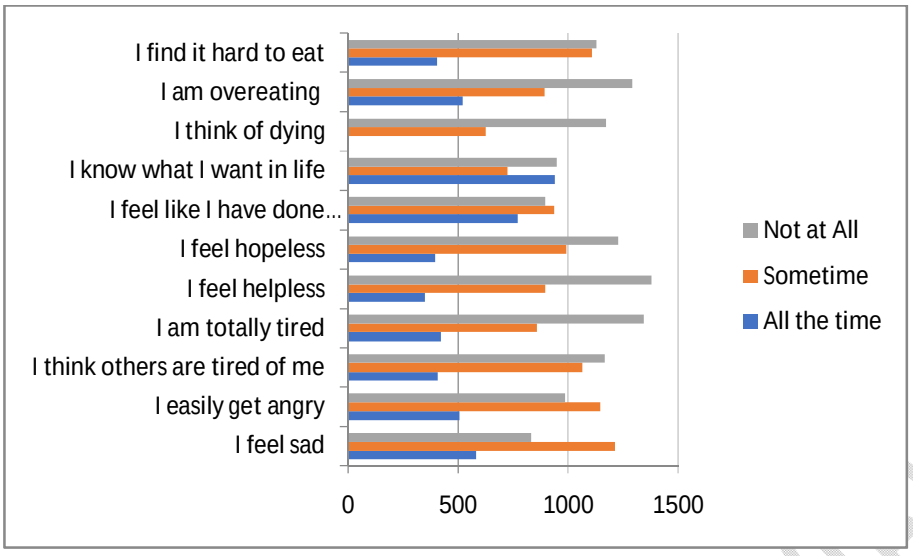

Figure 3 Learners' response on depression symptoms

In Figure 3 the learners responded to the statements and learners reported poor feeding habits, anger, sadness, helplessness, thoughts of death, tired, not feeling wanted during the time of COVID-19. These are symptoms of depression. The results concur with those of [14], which showed (44.8 - 62.9%) cases of Major depressive disorder globally (an increase of 27.6%, (25.1 to 30.3) due to COVID -19 pandemic. The findings of learners reporting the symptom all the time or sometimes shows that there is a need for practical steps to help learners manage and prevent depression. Depression is characterized by persistent sadness and a lack of or loss of interest or pleasure in previously rewarding or enjoyable activities, feelings of guilt or low self-worth, disturbed sleep or appetite and feelings of tiredness.

3.2.1 Learners' Depression per County

Table 3 shows learners' depression levels across counties that were sampled by the study.

Table 3. Learners' responses on depression per county

Crosstab

			Depression				Total
			Normal	Mild	Moderate	Severe	
County	Kajiado	Count	39	223	271	7	540
		% within County	7.20%	41.30%	50.20%	1.30%	100.00%
	Migori	Count	95	323	130	4	552
		% within County	17.20%	58.50%	23.60%	0.70%	100.00%
	Mombasa	Count	72	338	172	3	585

		% within County	12.30%	57.80%	29.40%	0.50%	100.00%
	Nairobi	Count	92	245	129	3	469
		% within County	19.60%	52.20%	27.50%	0.60%	100.00%
	Elgeyo Marakwet	Count	72	301	158	4	535
		% within County	13.50%	56.30%	29.50%	0.70%	100.00%
Total		Count	370	1430	860	21	2681
		% within County	13.80%	53.30%	32.10%	0.80%	100.00%

Source; Field data

Table 3 shows depression levels in the counties that were sampled by the study. Kajido County had 278 learners reporting moderate to severe levels of depression, Mombasa County 175 learners, Elgeyo Marakwet had 162 learners, Migori with 134 and Nairobi had 132 learners reporting moderate to severe levels of depression. Kajiado county though within a rural setting had the highest number of learners with COVID-19 depressive disorders. This can be attributed to pre existing cultural practices and the county being a border county which was in the limelight over the long distance truck drivers who were viewed as the agents COVID-19 spread. Cross-tabulation between counties on depression levels among learners was done using chi-square statistics. The results showed statistical significance (2 = 130.313, $p < .05$) between counties and the learners' levels of depression due to COVID-19. These means that learners experienced the feeling of hopelessness and helplessness during the long period of school closure due to COVID-19 pandemic..

3.2.2 Gender and Learners Depression

The study sought to establish levels of depression and learners gender and the results are as presented in figure 4.

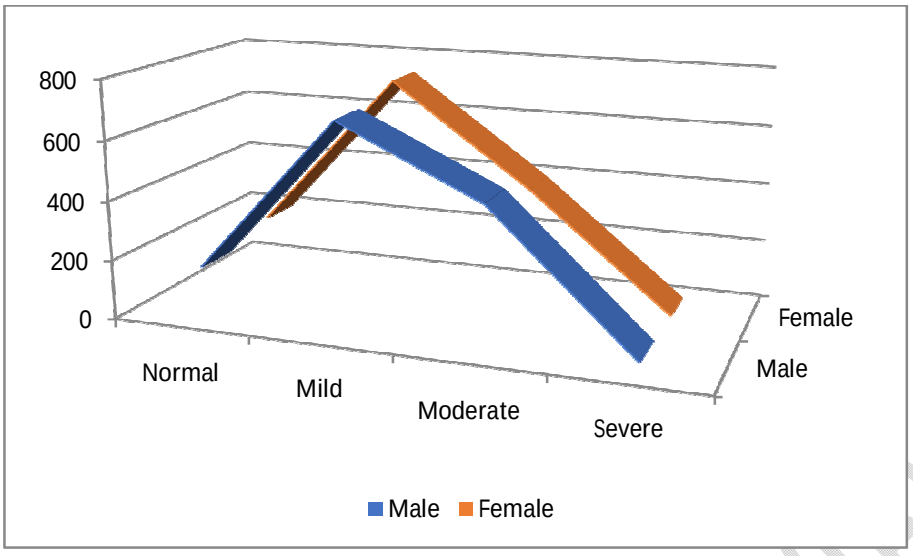

Figure 4. Depression and the learners Gender

The findings from the study showed that slightly more female learners reported moderate to severe levels of depression compared to male learners. A cross-tabulation between gender on anxiety level among males and female learners was done using chi-square statistics and the results showed no statistical significance (2 =21.736 p > .05) between gender of learners and levels of depression due to COVID-19. This clearly shows that gender did not have any implication on levels of depression among learners due to COVID-19 pandemic.

3.2.3 Learners Depression and School Category

The study sought to determine the levels of depression according to school categories as shown in Table 4.

Table 4 Learners' depression and the type of school attended

			Depression				Total
			Normal	Mild	Moderate	Severe	
School; Primary, Secondary and Special	Primary	Count	165	603	395	11	1174
		% l	14.10%	51.40%	33.60%	0.90%	100.00%
	Secondary	Count	190	773	458	10	1431
		% l	13.30%	54.00%	32.00%	0.70%	100.00%
	Special	Count	15	54	7	0	76
		%	19.70%	71.10%	9.20%	0.00%	100.00%
Total		Count	370	1430	860	21	2681
		%l	13.80%	53.30%	32.10%	0.80%	100.00%

Source: field data

Research findings showed that 468 learners in secondary schools had moderate to severe levels of depression while in primary schools 406 of the learners experienced the same levels and seven (7) of learners in Special schools experienced moderate to severe levels. This shows that more learners in secondary schools experienced higher levels of depression may be due to growth challenges of adolescents. Chi-square results based on a cross-tabulation between school categories (primary, secondary and special) showed a statistical significance (2 = 22.104, p < .05) between school categories and the learners' levels of depression due to COVID-19. Approximately 40%–90% of adolescents with depression" have a comorbid psychiatric disorder such as anxiety disorders, conduct disorders, substance abuse, and personality disorders as noted by [15]. There is a need for practical steps to help learners ease out and prevent depression.

3.3 Post-Traumatic Stress Disorder (PTSD) among Learners.

To assess PTSD learners responded to a 10 (ten) items. The learners were expected to rate their feelings as " All the time", " Sometime " or "Not at all". The results are as shown in Figure 5.

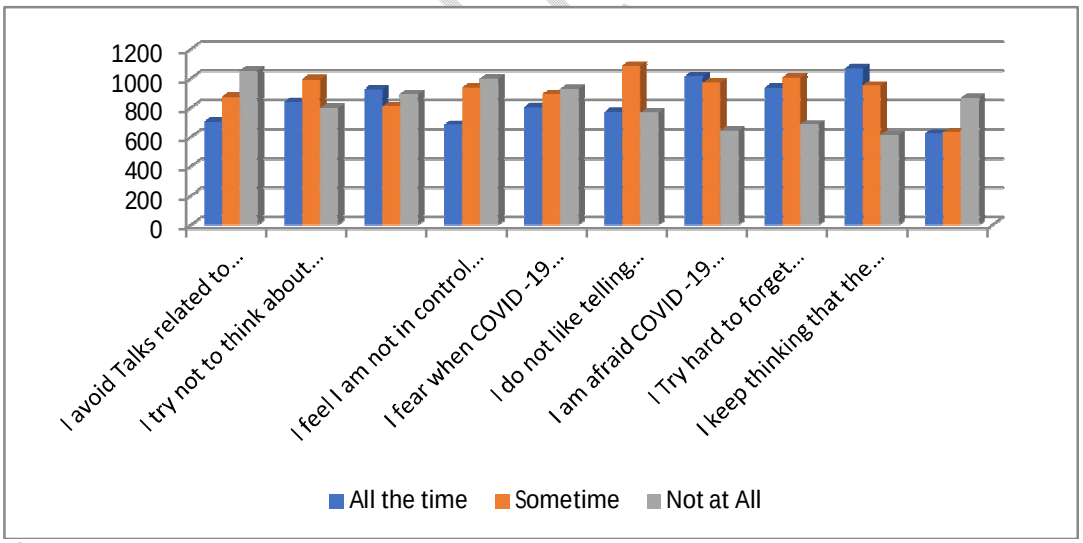

Figure 5 Learners responses on PTSD symptoms

Results in figure 5 shows that majority of the learners feared the schools would close again due to COVID-19, others tried hard to forget about COVID-19, some avoided any talk that was related to COVID-19 while others feared that they would die from COVID-19. All these are indicators of PTSD that learners are experiencing since the onset of COVID-19. [16] noted that there is a wide literature

base that has shown that those suffering from pandemic-related psychological distress tend to exhibit elevated levels of post-traumatic stress, general stress, anxiety, health anxiety and suicidal. [17], [18], [19] noted that the PTSD may last well beyond the course of the pandemic. When individuals have PTSD, the world feels unsafe for them. They may have upsetting memories, feel on edge, or have trouble sleeping. They may also try to avoid things that remind them of the trauma, even things they used to enjoy just like the results in figure 5 confirms.

3.3.1 PTSD levels among Learners per county

A summary of the sampled counties and levels of PTSD among learners were tabulated as shown in Table 5.

Table 5. Learners PTSD levels per County

			PTSD				Total
			Nor	Mild	Mode	Severe	
County	Kajiado	Count	57	248	214	19	538
		%	10.60%	46.10%	39.80%	3.50%	100.00%
	Migori	Count	67	265	193	26	551
		%	12.20%	48.10%	35.00%	4.70%	100.00%
	Mombasa	Count	69	250	237	29	585
		%	11.80%	42.70%	40.50%	5.00%	100.00%
	Nairobi	Count	52	207	187	23	469
		%	11.10%	44.10%	39.90%	4.90%	100.00%
	Elgeyo Marakwet	Count	64	209	229	31	533
		%	12.00%	39.20%	43.00%	5.8%	100.00%
Total		Count	309	1179	1060	128	2676
		%	11.50%	44.10%	39.60%	4.80%	100.00%

Source; Field data

The total number of learners in the five selected counties who experienced moderate to severe levels of PTSD were 1188(44.4%) however Mombasa county had the highest number of learners with PTSD with 266 (45.5%) while Migori county had the least with 219(39.7%). Mombasa is predominately a county where Muslims are the majority and COVID-19 really affected the cultural practices of Islamic faith and this could have contributed to trauma among children. A summary of the sampled counties and levels of PTSD as tabulated in Table 5 shows that, in all counties learners experienced PTSD due to COVID-19 pandemic and no part of the country that was spared as far as learners PTSD levels due to COVID-19 pandemic are concerned.

3.3.2 Learners PTSD and Gender

The study sought to establish the PTSD levels among learners and the and the gender and the results are presented in figure 6.

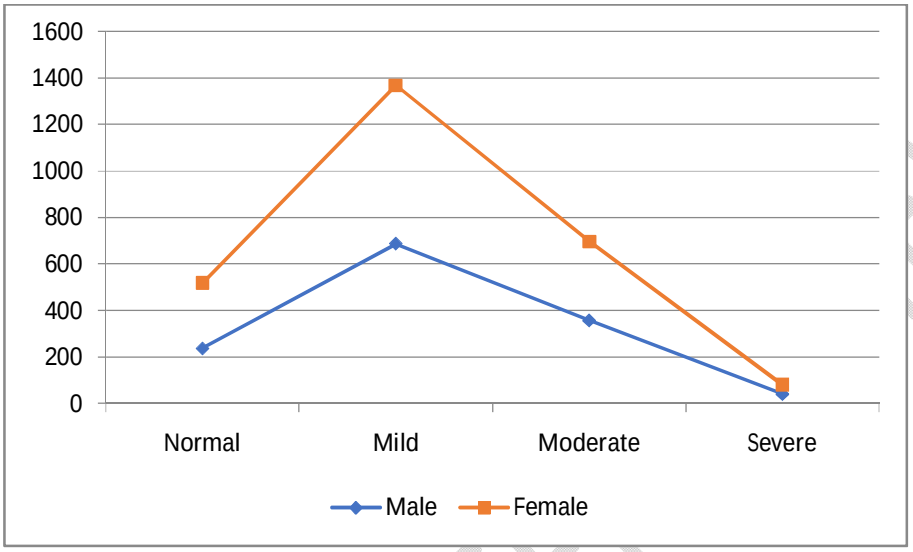

Figure 6. PTSD and learners gender

From figure 6 more female learners showed moderate to severe levels of PTSD than male learners. The female learners were more vulnerable even before COVID-19 and when the pandemic changed the environment the PTSD status levels for girls were aggravated.

3.3.3 PTSD among learners and School category

A cross tabulation of learners PTSD levels was done in relation to the school categories which were primary, secondary and special schools and the results are as shown in Table 6

Table 6. Learners PTSD and school category

			PTSD				Total
			Normal	Mild	Moderate	Severe	
School; Primary, Secondary and Special	Primary	Count	209	631	305	28	1173
		%	17.80%	53.80%	26.00%	2.40%	100.00%
	Secondary	Count	304	716	355	52	1427
		%	21.30%	50.20%	24.90%	3.60%	100.00%
	Special	Count	8	26	40	2	76
		%	10.50%	34.20%	52.60%	2.60%	100.00%
Total		Count	521	1373	700	82	2676

	%	19.50%	51.30%	26.20%	3.10%	100.00%

Source; Field data

Findings from Table 6 shows that 28.5% learners in secondary schools reported moderate to severe PTSD levels, 28.4% of the learners in primary schools and 55.2% of the learners in Special schools. More learners in special schools are experiencing moderate to severe levels of PTSD which can be attributed to pre-existing conditions of which special children have been subjected to prior to COVID-19. Chi-square results based on a cross-tabulation between school categories (primary, secondary and special) showed a statistical significance ($\chi^2 = 37.966$, $p < .05$) between school categories and the learners' levels of PTSD due to COVID-19. PTSD is a mental health condition that's triggered by exposure to an extremely threatening or a terrifying event or series of events [7]. According to [20], PTSD is said to be a public health concern as there are many people living with the symptoms of PTSD which affects their functioning.

After a traumatic event like combat, an assault, a disaster or a pandemic like COVID -19 it is normal to feel scared, keyed up, or sad at first. But if it's been months or years since the trauma and an individual is not feeling better, they may have developed Post-Traumatic Stress Disorder (PTSD). Experience of PTSD is characterized by 1) re-experiencing the traumatic event in the present, (intrusive memories, flashbacks or nightmares) so will have sleep problems, 2) anger, and avoidance of thoughts, certain people or places and memories of the event, changes in school performance and problems with friends, impulsive and aggressive behavior, out-of-place sexual behaviors, extreme behavior problems like self-harm, or problems with drugs or alcohol, 3) persistent perceptions of heightened current threat, people feel on edge [7]. PTSD symptoms go away on their own after a few months. However, some people show symptoms for years if they do not get treatment. When individuals have PTSD, the world feels unsafe. The above findings confirm the findings of a meta-analysis of existing research work and findings in relation to the prevalence of stress, anxiety and depression in the general population during the COVID-19 pandemic done by [21], which showed that individuals presented with severe symptoms of fear, anxiety, anger, depression and post-traumatic stress disorder. These findings also agree with the study done by [13] on psychological- behavioral intervention on depression and anxiety of COVID 19 patients which indicates the need to pay attention to people with anxiety and have appropriate interventions for them.

4. Conclusion

In conclusion the study found that all the learners assessed by this study showed that their mental health was affected by COVID -19 pandemic. Changes brought about by COVID -19 for example long period of school closures, relocation from the learners familiar homes, loss of jobs, led to inability to provide enough food, death, disrupted learner's lives putting their mental health at risk. Learners' lives are plagued by stress, anxiety, depression and PTSD during COVID-19 pandemic and this is a threat to their academic success. This study has reported the prevalence of mental health issues in schools in Kenya since COVID-19. Social determinants of health are in the environment where learners live (housing), learn, play, worship which were all negatively affected by COVID-19 therefore presenting a risk for learners' education and quality of life. This study concurs with a meta-analysis of existing research works and findings in relation to the prevalence of stress, anxiety and depression in the general population during the COVID-19 pandemic done by [21], which showed that individuals presented with severe symptoms of fear, anxiety, anger, depression and post-traumatic stress disorder. As stated in the Mental Health Action Plan by [22] this study concurs and the learners in Kenya were no exception. Mental health programmes should be considered as core component of comprehensive care in schools. This will help learners get support beyond physical health and academic performance and ensure that learners get the most out of their educational and life journey.

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ABBREVIATIONS

COVID- Corona Virus Disease

PTSD- Post Traumatic Stress Disorder

APPENDIX A: INFORMED CONSENT FORM

INFORMED CONSENT FORM FOR PARTICIPANTS OF 6-18 YEARS [To be read and signed by the person representing the child]

Dear Respondent,

You are invited to be part of this research study entitled "*Enhancing Mental Health and Psychosocial Support to address effects of COVID-19 among Primary and Secondary School Learners in Kenya".* You have been selected as a respondent or participant because you meet the selection criteria for this study. By participating in this study, we will understand the extent to which COVID-19 has affected the mental health and psychosocial well-being of learners thus assist to develop psychological interventions that are specific to primary and secondary school learners during and after.

Participating in this study is your choice. You can choose to take part in this study, or you can choose not to take part in the study. You can also decide to stop being in this study at any time. If you say no,

or if you stop being in the study, there will be no penalties. The identity of the participants will be protected and confidentiality maintained during and after the project.

If you have any questions regarding this study or you want any clarification pertaining this research you may contact the study Principal Investigator/Lead researcher: Prof. Micah C. Chepchieng, Department of Psychology, Counselling and Education Foundations, Egerton University.

If you want to know more about your rights while participating in this research or if you feel that your rights have been violated you may contact the Egerton University Research Ethics Committee (EUREC) Chairperson, P.O. Box 536-20115, EGERTON-Kenya, Egerton University.

Consent of the Respondent

I have read the information provided or has been read to me. I have been given an opportunity to ask questions and the questions have been answered satisfactorily. I consent voluntarily to participate in the project knowing that I have a right to withdraw at any time.

Participant's Name (Optional): ……

Signature: ----------or Thumb print----------

Date: ……

Consent of the School administrator of the child

I have read the information provided as the school administrator of the child. I have been given an opportunity to ask questions and the questions have been answered satisfactorily. I consent voluntarily for the child to participate in the project knowing that I have a right to withdraw the consent and stop the child from further participating in the research at any time.

Name of School administrator: ……

Signature----------or Thumb print----------

Date: ……

I the undersigned affirm that the consent have been sought with full disclosure of project details to the participant to consent. (I have explained the study to the extent compatible with the participant's capability, and the participant has agreed to be in the study)

Name of the School administrator: presenter (who presented/explained the consent document): ……

Signature: ……

Date: ……

Principal Investigator: Prof. Micah Chemobo Chepchieng.

Signature: ……..

Date: ……