



## Effects of COVID-19-Related Stress on Performance of Academic Staff in Western Kenyan Public Universities

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**Abstract:** This study sought to come up with findings about the effect of COVID-19-related stress on academic staff performance in Western Kenyan public universities through the cross-sectional descriptive design. From the population of 350 academic staff in two selected Universities, 245 were selected through various procedures. Data collection was done by use of a self-administered questionnaire. Data was treated through descriptive statistics, t-test and Pearson Product Moment Correlation Coefficient. Using three guiding research questions, the results of the study led to the following conclusions: academic performance reduced during the COVID-19 period with academic staff sometimes undertaking activities related to academic performance. There is a significant difference in the academic performance before and after the COVID-19 outbreak. Finally, COVID-19 affected the performance of the academic staff negatively. Based on the conclusions, the study recommends that responsible authorities should establish an emergency policy to curb emerging issues during pandemics to avoid potential effects on academic performance in the future. Universities are called upon to establish user-friendly ICT policies and facilities that would sustain the performance of academic staff during similar pandemics in the future. Finally, there is a need to establish mental health teams who would provide mental health services and counseling sessions to affected academicians so that their academic performance might be maintained during pandemics.

**Keywords:** COVID-19; Public Universities; Academic Staff Performance; Western Kenya.

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### Introduction

Academic staff performance has turned out to be an integral topic of study in the 21st century due to its impactful nature on the academic community.

Similarly, it has been essential to the success and development of universities and the community. However, traditional metrics used to assess academic performance among academic employees

have changed. In contrast to earlier times when one had had to teach and supervise post-graduate students only, academic performance is currently demonstrated by the ability of academic staff to teach, carry out research, disseminate findings in conferences and symposiums, publish, generate new knowledge and help in solving problems related to academic ventures (Jameel & Ahmad, 2020). Universities today are structured internationally. More work needs to be done in terms of academic performance evaluation metrics for any university to move up the Academic Ranking of World Universities (ARWU), often known as the World University Rankings Metrics (Abubakar et al., 2018). Successful research endeavors and publishing are performance measures for academic performance.

However, since the start of the COVID-19 pandemic, there has been a noticeable reduction in publications and other scholarly activities. According to Raynaud et al. (2021), the COVID-19 pandemic was linked to an 18% decline in the number of articles that weren't about COVID-19. Additionally, Riccaboni and Verginer (2022) argue that COVID-19 has replaced publications from clinical trials (by 24%) and shifted money from topics of study that are not directly related to COVID-19. In Kenya, Kombo and Itumbi (2022) reported that in the post-COVID-19 era, efforts on proposal writing for financing and research activities were severely decreased. Thus, they were in agreement with other conducted studies on the decrease in academic staff performance in this regard.

Relyea et al., (2023) cited that unmanaged stress is to be blamed for the decline in academic achievements among the teaching staff. Researchers have ascertained that stress has a negative impact on academic performance. According to Giusti et al. (2021), COVID-19-related stress caused a significant impairment in concentration among many academics in institutions of learning. Meng and Wang (2018) cited that university faculty members' stress levels are influenced by a variety of factors. The number one cause of excessive pressure, which further leads to physical and mental tiredness, is work overload. Additionally, the lack of university support in the form of financing, resources, and recognition is a source of occupational stress. Low job satisfaction among employees is another factor that may make it more probable for academic personnel to depart.

Academics reportedly underwent increased stress during the COVID-19 time. For instance, a study carried out in the UK revealed that 66% of academics had moderate stress levels and 16.1% had high levels of stress (Shen & Slater, 2021). A nearly identical outcome was observed in Spain where 50% of research participants reported high levels of stress, 49% reported anxiety and about 32.2% had depressive symptoms (Ozamiz-Etxebarria et al., 2021). Similarly, 82% of teachers in Ireland reported moderate to high levels of burnout during the COVID-19 pandemic, which had a detrimental effect on their physical and mental health. In addition, 66% of instructors said they were not happy with their work (Minihan et al., 2022).

Similarly, research conducted in Africa comes to similar conclusions. In a South African study, for instance, a study carried out to assess how academics felt about the impact of working from home indicated that working from home was tiresome; it was stressful to balance between home activities and academic activities. This stressful situation had a detrimental impact on teaching and learning and it slowed down academic performance among the academic staff in terms of research, teaching, supervision of students, dissemination of findings, and publications (Iwu et al., 2022). In another study conducted in South Africa, academic staff members were found to be at a heightened risk for their emotional and physical health during the COVID-19 lockdown (Aleksić et al., 2012).

## **Methodology**

### **Design**

This study employed the cross-sectional descriptive design. Cross-sectional descriptive design is used to collect information from different categories of people at a pointed time. In this study, the academic staff categories were listed as professors, associate professors, senior lecturers, lecturers, assistant lecturers and tutorial fellows. This design was further used to measure the outcomes and the exposures in the study participants concurrently. The study focused on identifying how the outbreak and spread of COVID-19 affected the performance of academic staff.

### **Population and Sampling**

This study was carried out in the Western part of Kenya. Masinde Muliro University of Science and Technology (MMUST) and Kibabii University were considered major hubs of knowledge in the region and therefore accounted for the highest number of

university teaching staff, thus the two universities were purposively sampled. MMUST is a public Kenyan university situated along Kakamega-Webuye Road, 10 KMs from the Kakamega Central Business District. Kibabii University, on the other hand, is a public university, which was previously a Constituent College of MMUST.

From the staff returns of the 2020-21 financial year, MMUST had an estimated population of 350 academic staff and Kibabii had 300. This makes the total target population for this study to be 650 academic staff. The academic staff were sampled using cluster, convenient and disproportional random sampling techniques. Table 1 illustrates the respondents, their cadre and sampling technique.

**Table 1: Sampling Matrix**

Category of Academic Staff	Frequency	Percentage	Sampling Technique
Professor	5	2.0	Disproportional stratified and Convenient sampling
Associate Professor	5	2.0	Disproportional stratified and Convenient sampling
Senior Lecturer	19	7.8	Disproportional stratified and Convenient sampling
Lecturer	126	51.4	Disproportional stratified and Convenient sampling
Assistant Lecturer	21	8.6	Disproportional stratified and Convenient sampling
Tutorial Fellow	69	28.2	Disproportional stratified and Convenient sampling
<b>Total</b>	<b>245</b>	<b>100.0</b>	

### Instruments

Data collection was done by use of a self-administered questionnaire which was intended to collect data on demographic factors, assess the effects of COVID -19 related stress on academic staff performance and academic staff efforts to adapt to the new normal.

### Validity and Reliability

Independent experts majorly from the School of Education and the Department of Educational Psychology in MMUST were engaged to examine the content of items contained in the questionnaire. Their feedback was closely similar, which ascertained that the questionnaire was valid. A pilot study was conducted at Maseno University in Kenya for the sake of ensuring that the instrument is reliable. Thirty questionnaire sheets were distributed and filled by the 30 respondents. After testing, a Cronbach Alpha ranging from 0.735 to 0.874 was yielded. Therefore, the questionnaire was considered reliable.

### Statistical Treatment of Data

Different statistical procedures were applied in data treatment. In question one, a mean score for each statement was measured on the scale of 4.50-5.0= never, 3.50-4.49 = rarely, 2.50-3.49 = sometimes,

1.50-2.49 = very often, and 1.00-1.49 = always. Outputs of research question two were established by running a combined paired t-test for the items measuring the academic performance of the academic staff before and after the COVID-19 period. Pearson Correlation Coefficient (*r*) was used to test the third research question to establish the nature and the direction of the relationship between COVID-19-related stress and the performance of university academic staff.

## Results and Discussion

This section presents and discusses the findings of the study. The section begins with the presentation of demographic factors.

### Demographics of Respondents

Table 2 lists the respondents' socio-demographic traits in detail.

Male respondents were 151 (61.6%) while the female counterparts were 94 (38.4%). This finding unveils the unequal representation of gender in the employment of academic staff in the two universities.

In terms of education level, 121 (49.4%) of the respondents were having a doctorate degree, closely followed by 120 with master's degrees (49.0%). Those with bachelor's degree were 49

(1.6%). In terms of academic category, the minority of respondents were the full and associate professors both recording 5% and the majority of the participants were 126 lecturers (51.4%). The rest of the categories were senior lecturers (7.8%),

assistant lecturers (8.6%) and tutorial fellows (28.2%). Experience of working ranged between one and above 11 years. The least (2.4%) had worked for lesser than a year.

**Table 2: Demographic Characteristics of Respondents**

SN	Category	F	%
1	Gender		
	Male	151	61.6
	Female	94	38.4
	<b>Total</b>	<b>245</b>	<b>100</b>
2	<b>Education</b>		
	Doctorate	121	49.4
	Masters	120	49.0
	Bachelor	4	1.6
	<b>Total</b>	<b>245</b>	<b>100.0</b>
3	<b>Academic Category</b>		
	Professor	5	2.0
	Assoc. Professor	5	2.0
	Senior Lecturer	19	7.8
	Lecturer	126	51.4
	Assistant Lecturer	21	8.6
	Tutorial Fellow	69	28.2
	<b>Total</b>	<b>245</b>	<b>100.0</b>
4	<b>Work Experience</b>		
	Lesser than a year	6	2.4
	1-5 years	121	49.4
	6-10	107	43.7
	11 and above	11	4.5
	<b>Total</b>	<b>245</b>	<b>100.0</b>

**Table 3: Academic Performance Trends**

SN	Item	Mean	Interpretation
1	Winning a research funding	3.38	Sometimes
2	Post-graduate student supervision online	3.06	Sometimes
3	Applying for research grant	3.05	Sometimes
4	Setting and administering online tests and doing online evaluations	3.05	Sometimes
6	Preparing one or two research articles for publication	2.96	Sometimes
5	Creating an outline for a study paper to be presented at a conference	2.95	Sometimes
7	Writing a research paper required to combine concepts and source data	2.75	Sometimes
8	Teaching undergraduate students	2.46	Sometimes
	<b>Overall Academic Performance</b>	<b>2.96</b>	<b>Sometimes</b>

**Research Question 1:** What is the trend of academic performance at universities in Western Kenya?

Each of the respondents were provided with eight statements on how often they focus on doing to promote their academic performance. The eight statements were rated on a scale of 1 to 5 with the following scoring ranging from; 1 “always”, 2 “very often”, 3 “sometimes”, 4 “rarely”, and 5 “never.” The results were presented as follows: 4.50-5.0=

Never, 3.50-4.49 = rarely, 2.50-3.49 = Sometimes, 1.50-2.49 = Very often, and 1.00-1.49 = Always. The results are presented in Table 3.

From Table 3, sampled respondents indicated that they sometimes won research funding (Mean=3.38), supervised post-graduate students online (Mean=3.06), applied for research grants (Mean=3.05), set and administered online tests and did online evaluations (Mean=3.05). Further, they

sometimes created an outline for a study paper to be presented at a conference (Mean=2.95), prepared one or two research articles for publication (Mean=2.96), wrote a research paper that required them to combine concepts and data from several sources (Mean=2.75) and taught undergraduate students (Mean=2.46). The overall academic performance was at 2.96 implying that the sampled respondents sometimes undertook activities relating to their academic performance.

**Research Question 2:** Is there a significant difference in academic performance before and after the Covid-19 Pandemic?

The study's main objective was to evaluate the average differences in academic staff members'

daily academic activities before and after COVID-19. The term "before" as used in this study refers to the time before the COVID-19 era, whereas the term "onset" may relate to the time when the first COVID-19 case was documented in Kenya up to the present.

The results show that academic performance was less satisfactory at the onset of COVID-19 (M2=3.1454) compared to the Pre-COVID-19 era (M1=2.7689) and the mean difference (M. D=-0.37653) between the two periods was significant as shown by the Sig. =0.000 which is lesser than the critical value. This implies that academic performance decreased during COVID-19 period.

**Table 4: Difference in Academic Performance before and after of COVID-19**

	Mean	Mean Diff	t	Df	Sig
Mean one (M1) represents (before COVID-19)	2.7689	-.37653	-6.769	244	.000
Mean two (M2) represents (Onset of COVID-19)	3.1454				

**Table 4: Correlation between COVID-19 Related Stress and Academic Performance of Academic Staff**

		COVID-19 Related Stress	Academic Performance
<b>COVID-19 Related Stress</b>	Pearson Correlation	1	-.218**
	Sig. (2-tailed)		.001
	N	245	245
<b>Academic Performance</b>	Pearson Correlation	-.218**	1
	Sig. (2-tailed)	.001	
	N	245	245

In line with this study's findings, a UK study found that although COVID-19 provided the potential for new research avenues, researchers were unable to take full use of these opportunities due to obstacles such as difficulty in accessing research resources, the growing demands of teaching and other personal characteristics that were deemed to have a detrimental effect on academics (Finn et al., 2022). Other studies reported the dangers of mistakes made in reports and especially those that are put on media platforms or released quickly during catastrophes without proper scrutiny (Smith et al., 2020).

**Research Question 3:** Is there a significant relationship between COVID-19 Related Stress and the University Academic Staff Performance?

This research question sought to establish the nature and the direction of the relationship

between COVID-19-related stress and the performance of University academic staff as seen in Table 4. This research called for testing of the following null hypothesis: there is no significant relationship between COVID-19-Related Stress and the University's Academic Staff Performance. The hypothesis was tested through Pearson Product Moment Correlational Coefficient.

Results in Table 4 indicate a significant yet weak and inverse relationship between COVID-19-related stress and Academic performance ( $r=-.218, p=00<.001$ ). The null hypothesis is therefore rejected. This implies that the more the Covid-19 related stress, the lower the academic performance. Therefore, COVID-19-related stress significantly affected performance in a negative way. Supporting the negative impact, a recent study by Prasetyanti et al. (2020) on employees in the service sector during the COVID-19 pandemic indicated that employee

performance was expected to drastically decline due to the prevailing circumstances triggered by emergence of the COVID-19.

Furthermore, Ozamiz-Etxebarria et al, (2021) revealed that COVID-19 had a negative impact on lecturers' performance in Portuguese universities. Omwenga et al (2021) studied the impact of the COVID-19 Pandemic in African Universities and established that the teaching staff were mainly concerned with access to teaching resources. They conducted online teaching and dealt with the capacity to handle the online mode of teaching which negatively affected their academic performance. The findings indicated that interactive activities were drastically reduced during the post-COVID-19 period; a significant number of classes and postgraduate defenses were postponed for related reasons. Activities on proposal writing for funding and research activities were also drastically reduced.

## Conclusions and Recommendation

### Conclusion

The study concludes that academic performance reduced among universities in the Western Kenya during the COVID-19 period with academic staff sometimes undertaking activities related to academic performance. The study further concludes that there is a significant difference in the academic performance at universities in the Western Kenya before and after COVID-19 with a significant reduction in performance after the pandemic. Finally, there is a significant yet negative relationship between COVID-19-related stress and academic performance. This implies that the more COVID-19 related stress, the lower the academic performance. Therefore, Covid-19 affected the performance of the academic staff in a negative way.

### Recommendations

Based on the conclusions, it is recommended that responsible authorities should establish an emergency policy to curb emerging issues during pandemics to avoid potential effects on academic performance. Furthermore, universities are called upon to establish user-friendly ICT policies and facilities that would sustain the performance of academic staff during similar pandemics in the future. Finally, there is a need to establish mental health teams who would provide mental health services and counseling sessions to affected academicians so that their academic performance

might be maintained during pandemics. In addition, universities should establish social support systems and welfare programs so that academic personnel can communicate experienced issues and ask their peers for help.

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