

## Research Article

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## Article detail

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## The extent of self-reported impact of COVID-19 on daily academic activities and incomes among university students in Kumasi, Ghana

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**Abstract:** Students at universities are becoming recognized as a vulnerable populace, with much greater rates of depression and workload/activities than the overall population amidst COVID-19. As such, the present research

intends to document the extent of self-reported impact on university students' everyday academic lives and incomes. In August of 2021, a cross-sectional, self-administered internet-based poll was conducted among Ghanaian university students in Kumasi. The data was retrieved from the internet using Microsoft Excel and then analyzed using STATA software version 14. Both univariate and logistic regression analysis were performed, with a p-value < 0.05 regarded statistically significant (\*). The study included 430 participants, majority of whom were single (98.6%), young adults (89.8%), and Christians (90.7%). This survey found that 52.1% said the COVID-19 epidemic has a highly significant impact on their daily activities and income. Among other risk factors considered by the study, only students with a perceived risk of COVID-19 infection are approximately three times more likely to be affected by the pandemic in their daily academic activities and incomes than those who were not (Adj. OR = 2.516, 95CI% = 1.551–4.081, p < 0.001). The knowledge advanced by this study will educate stakeholders and aid policy-makers in higher education in improving public educational provisions. The results of this study may be used to predict the future effects of the pandemic. The novelty of this research also lies in its self-reported approach to analyzing the effect of the pandemic on the income and everyday academic activities of university students in Kumasi.

**Keywords** – COVID-19, Daily life, Ghana, Income, Students

## 1. INTRODUCTION

The worldwide education sector has faced unusual problems as a result of the Coronavirus 2019 (COVID-19) pandemic (Crawford et al., 2020; UNESCO, 2020). The majority of nations temporarily shuttered educational facilities in an effort to restrict the virus's spread and minimize infection rates (Tria, 2020). Ghana is no exception to this norm, having announced the formal closure of its schools on March 16th 2020 (Dean, 2020). Since then, Ghanaian schools and colleges have used a range of remote learning techniques, ranging from official learning platforms to informal technologies such as WhatsApp, Telegram and others (Dean, 2020).

Educational institutions, businesses, and marketplaces were closed for more than days as a result of the restrictions. These limits were later withdrawn, but were reinstated during COVID-19's resurgence in 2021 (Tran, 2021). It was recently the educational institutions returned to session with all the COVID-19 safety protocols in place. Students at various universities are becoming recognized as a vulnerable populace (Browning, 2021) with much greater rates of depression and workload/activities than the overall population as a result of these changes.

Some students' altered and irregular lifestyles are having an effect on their everyday lives (Browning, 2021) as well as their income and education. Excessive social media use disrupts their social lives, resulting in negative effect on their general educational health (Chinna et al., 2021; Keku & Patterson, 2022). According to (Browning, 2021), the authors highlighted the interruptions to the everyday lives of certain office employees and some Indian undergraduate students. They noted interrupted health, well-being, and sleep as a result of daily routine disruption, worry, loneliness, an increased load on family and work, and excessive screen usage. Thus, when the quality of their educational experience is fundamentally altered—for example, through the implementation of online classrooms or through modifications to routine daily living activities in accordance with COVID-19 pandemic safety protocols—the burden on this vulnerable group is magnified (Amir et al., 2020; Almendingen et al., 2021).

The present research intends to document the extent of self-reported impact on university students' everyday lives and income. We hypothesized that students' daily life activities as well as incomes were severely affected by the COVID-19 pandemic.

## 2. PROBLEM STATEMENT

University students are now understood to be a particularly vulnerable group, with much higher rates of depression than the general population (Dean, 2020; Browning et al., 2021), altered and irregular lifestyles, and excessive social media use disruptions, all of which have a detrimental impact on their overall educational health (Chinna et al., 2021; Keku & Patterson, 2022) following the numerous online or e-learning activities after the closure of schools amidst the COVID-19 pandemic. Data on the situation in the study area is, however, scanty. The goal of the current study is to document the extent of the self-reported effects on the incomes and daily academic activities of Ghanaian university students in the Kumasi Metropolitan Area.

## 3. RESEARCH OBJECTIVES/QUESTIONS

The primary purpose of the research was to determine the extent of the self-reported impacts on the earnings and everyday academic activities of university students from Ghana in the Kumasi Metropolitan Area. The following research questions were developed to assist the researchers in achieving the purpose of the study.

- RQ1: What are the socio-demographic characteristics of Ghanaian university students in the study area?
- RQ2: Are the respondents daily academic activities and incomes affected negatively by the pandemic?
- RQ3: How did the respondents perceive the COVID-19 Infection?
- RQ4: What risk factors magnified the impact of the pandemic among Ghanaian university students in the study area?

#### 4. METHODS (Design, Sampling, Online questionnaire, and Data analysis)

In August of 2021, a regional wide cross-sectional, self-administered internet-based poll was conducted. The study was conducted from 11<sup>th</sup> to 25<sup>th</sup> August, 2021 after Ghana had recorded over 120,000 COVID-19 cases and over 1,000 deaths, and the Delta strain was bringing in a third wave (UNICEF, 2021). For participant recruitment, the study employed both convenient and snowball sampling techniques.

The questionnaire investigated 1) the sociodemographic characteristics of the students. 2) The frequency of self-reported COVID-19 impact severity. 3) perceived risk of infection. To eliminate any bias induced by self-reported data, participants' replies were kept personal and anonymous. The questionnaire was also developed to reduce survey stress and was examined for validity and reliability by consultants in survey research.

Several researchers (Browning, 2021; Tran, 2021; Kemp, 2021; Barua, Datta & Bardhan, 2021) used social media to obtain data during the COVID-19 epidemic. This study utilized Google Forms to produce an online self-administered questionnaire that was disseminated via WhatsApp. In light of the snowballing approach, participants were also asked to share the web link with family and acquaintances since in-person interviews were discouraged due to the risk of pandemic exposure and infection.

Data was retrieved and analyzed using Microsoft Excel (Microsoft Office 2016) and STATA software version 16. For the sample demographic variables, descriptive statistics (frequency, percentage) were computed. Contingency tables were created, and all results on the frequency of self-reported COVID-19 impact severity were compared to demographic factors. To investigate factors associated with respondents' self-reported influence of the COVID-19 on their daily academic activities, a univariate analysis was followed by a multivariable logistic regression analysis that included all components that showed significance ( $p < 0.05$ ). For each independent variable, odds ratios (OR), 95% confidence intervals (CI), and p-values were calculated, with a p-value  $< 0.05$  being statistically significant (\*).

#### 5. DATA ANALYSIS AND DISCUSSIONS

This section discusses the insights provided by the analysis of participant responses. Tables and graphs have been used to show the findings.

##### RQ1: Socio-demographic characteristics of Study Participants.

The research study included 430 participants, most of whom were singles (98.6%), young adults (89.8%), males (56.7%) and Christians (90.7%). All the participants were university students among the study area.

Table 1: Socio-demographic characteristics of respondents

VARIABLES	CATEGORIES	TOTAL, N (%)
Gender	Male	244 (56.74)
	Female	186 (43.26)
Age: median (IQR)		25 (19-32)
Age category	Young Adult (18-44)	386 (89.8)
	Middle Adults (45-64)	44 (10.2)
Marital status	Single	424 (98.6)
	Married	6 (1.4)
	Divorced/Widowed	0 (0.00)
Religious affiliation	Christian	390 (90.7)

	Muslim	34 (7.91)
	Others	6 (1.40)
<b>Total</b>		<b>430 (100)</b>

SOURCE: Field Survey, 2021

**RQ2: Frequency of Self-Reported Extent of Covid-19 Impact:**

The study revealed that the majority of 290 (67.4%) reported being severely affected by the pandemic in their daily activities. Similar evidence was depicted on the assessment of the Covid-19 impact in students’ income. Approximately 60% are said to be severely affected by the Covid-19 pandemic. Less than 25% of the students expressed not being affected by the Covid-19 pandemic either in their daily life or income. This survey found that 52.1% said the Covid-19 epidemic has a highly significant impact on their daily activities and income.

**Table 2: Frequency of Self-Reported Extent of COVID-19 Impact**

Extent of Covid-19 Impact on students’ Daily academic activities	Frequency n	Total (%)
High/Very High	290	67.44
others(Fair/neutral/not at all)	140	32.56
Extent of Covid-19 Impact on Students’ Income		
High/Very High	260	60.47
others(not severe/neutral/no)	170	39.53
Extent of Covid-19 Impact on both Students’ Income and daily academic activities		
High/Very High	224	52.1
others(not severe/neutral/no)	206	47.9
<b>Total</b>	<b>430</b>	<b>100.00</b>

SOURCE: Field Survey, 2021

**RQ3: Perceived Risk of Covid-19 Infection Among Students:**

Analysis of students’ perceived risk of Covid-19 infection depicts that 53% of the participants perceived that they were at high-to-very high risk of contracting COVID-19. (See figure 1).

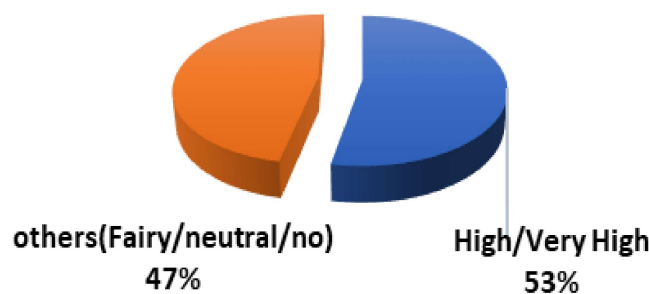


Figure 1: Perceived Risk of COVID-19 Infection Among Students

**RQ4a: Univariate Association Among Study Variables (Bivariate Analysis)**

The Chi-square test from the univariate logistic table depicts that there was no significant correlation between self-

reported negative impact and other research variable, except for marital status (p-value=0.043) and perceived infection risk (p-value<0.001).

**Table 3:** Univariate association of selected sociodemographic factors with the level of satisfaction among the participants with the online/e-learning education

Variables	Category	The extent of Covid-19 impact		Others(neutral/no)		p-value
		High/very High 224 (52.1%)		206 (47.9%)		
Gender	Male	170	58.6	74	47.1	0.258
	Female	54	41.4	132	52.9	
Age category	Young Adult (18-44)	206	89.6	126	90	0.912
	Middle Adults (45-64)	18	10.4	80	10	
Marital status	Single	208	93.1	136	87.1	0.043*
	Married	16	6.9	70	12.9	
	Divorced/Widowed	0	0.0	0	0.0	
Religious affiliation	Christian	208	88.9	132	84.3	0.108
	Muslim	14	9.1	74	15.7	
	Others	2	2.0	0	0.0	
Perceived Risk of infection	High/very High	180	72.0	78	34.3	P<0.001**
	others(not severe/neutral/no)	44	28.0	128	65.7	

SOURCE: Field Survey, 2021. Significant at \* p-value<0.05 and \*\* p-value<0.01

#### R4b: Factors Contributing to Students' Self-Reported Extent of COVID-19 Impact

A multivariate logistic regression model was used to assess factors that influenced their self-reported impact of the pandemic. The data suggested that students with a perceived risk of COVID-19 infection tend to be highly affected by the pandemic in their everyday academic activities and incomes (Adj. OR = 2.516, 95CI% = 1.551-4.081, p<0.000).

**Table 4:** Factors Contributing to Students' Self-Reported Extent of Covid-19 Impact (Bivariate Analysis)

The extent of Covid-19 impact	Adj. Odds Ratio	[95% CI]		P-value
		Lower	Upper	
<b>Gender</b>				
Male	1			
Female	1.287	(0.785	2.110)	0.317

<b>Age</b>				
<i>Young Adults</i>	1			
<i>Middle Adults</i>	1.230	(0.503	3.011)	0.650
<b>Marital Status</b>				
<i>Single</i>	1			
<i>Married</i>	3.511	(0.237	52.04)	0.361
<b>Religious Affiliation</b>				
<i>Christianity</i>	1			
<i>Muslim</i>	0.497	(0.186	1.327)	0.163
<i>Others</i>	1			
<b>Perceived risk of Infection</b>				
<i>No/neutral</i>	1			
<i>Perceived</i>	2.516	(1.551	4.081)	<b>0.000**</b>
<i>Constant</i>	0.098	(0.058	0.165)	<b>0.000**</b>

SOURCE: Field Survey, 2021. Significant at \*  $p$ -value<0.05, \*\*  $p$ -value<0.01 and \*\*\*  $p$ -value<0.001

## 6. GENERAL DISCUSSIONS

The study's objective was to acquire a further understanding of the COVID-19 pandemic's effect on university students. While other researchers have examined the impact of COVID-19 on university students' physical activity levels, higher education systems, and psychological impact globally (López-Valenciano et al., 2021; Chinna et al., 2021; Browning, 2021), this study is unique in that it assessed the extent to which Ghanaian university students self-reported the impact of COVID-19 on their daily academic activities and incomes.

According to the research, 98.6 percent of the students had never been married, were between the ages of 18 and 44, and were Christian (90.7%). Browning's results are in agreement with this (Browning, 2021). Also, data collected so far suggests that there is a relatively moderate (52.1%) negative impact on daily activities and income among Ghanaian university students within the study area. More than half (53%) of the university students perceived that they were at a high-to-very high risk of contracting COVID-19. This implies that the COVID-19 pandemic really caused fear and panic among participants (Rodríguez-Hidalgo et al., 2020; Xue et al., 2021). Hence, this results is a reflection of the high degree of impact on daily activities as well as income.

The research used an unrestricted self-administered survey that relied on participants' internet reachability and shareability. This research design also examined the extent of self-reported COVID-19 impact on Ghanaian university students' daily academic activities and incomes at a certain moment in time, which is possibly prone to change with several interventions in Ghana in the future. The study's shortcomings may have created selection bias and reduced generalizability to the general population. To truly capture the COVID-19 effects, future study should use mixed methods research including both qualitative and quantitative methodologies.



## 7. CONTRIBUTIONS TO SCIENTIFIC COMMUNITY AND FUTURE RESEARCH

On the basis of the findings of this research, a number of further studies may be developed. Future study should apply a combination of qualitative and quantitative methodologies to adequately capture the extent of COVID-19's self-reported impact in Ghana. Additionally, future studies may provide additional light on COVID-19's influence throughout time and the factors that contribute to such changes/impact.

## 8. CONCLUSION

The current research study concludes that university students within the study area were affected by the pandemic in their daily lives' activities and income self-reportedly. Government stakeholders, such as the Ministry of Education and the National Commission for Civic Education, must improve public educational provision as well as provide incentives to help university students. The findings of this survey may be used to forecast pandemic's impact in the future.

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There were no commercial or financial ties that may be considered as a possible conflict of interest throughout the study process.

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