

**Effects of Covid-19 Pandemic and coping  
mechanisms of ordinary level secondary school  
finalists in Tanzania**

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**Abstract**

*This study sought to examine the effects of COVID-19 on finalist secondary school students in Tanzania. The study also sought to find out the coping mechanisms employed by students, teachers and parents in the efforts of mitigating the pandemic. A qualitative research approach which adopted a phenomenological design was utilised for data collection and analysis. A snowball sampling technique was used in selecting 36 study participants. These included 12 students, 12 teachers and 12 parents. Data were collected through interviews and non-participant observations. Trustworthiness and credibility of the findings were achieved using triangulation of data collection tools and quotations from the participants. The findings revealed that COVID-19 has multiple effects on academics. The study also revealed that coping mechanisms such as ICT and positive institutions and communities were used to minimize fear, stress, confusion and stigma. Due to the seriousness of the pandemic, and the fact that the world might have to live with it for a long period as expected, the study recommends that governments, school leaders, teachers, parents and students embrace digital teaching and learning and devise various coping mechanisms including positive institutions and communities to mitigate the multiple academic effects which may arise.*

**Keywords:** COVID-19 Pandemic, Coping mechanisms, Finalist Students, ICT, positive institutions and communities.

## **1.0 Introduction and background**

The Tanzanian education system, like in many other countries across the globe, was significantly impacted by COVID -19 pandemic. COVID-19 is a strain of Severe Acute Respiratory Syndrome (SARS-CoV-2), identified and reported in Wuhan city, China. Later on, it spread across the globe and grew into a global pandemic as declared by World Health Organization (WHO) on 30<sup>th</sup> January 2020 (Pandian, 2020; Roy et al., 2020). It spreads through contact with other infected individuals, with symptoms such as fever, cough, and breathing problems. Its transmission can also occur from individuals up to 40 per cent of the remaining asymptomatic (Saleh, 2020). The facilitative environment for infection includes airborne transmission, the vulnerability of immune-compromised individuals with specific underlying health conditions such as hypertension, diabetes, cardiovascular disease, respiratory problems, and susceptibility of persons over 65 years. Over 1.3 million cases were confirmed with COVID-19 and over 69,479 people were reported dead as a result of this pandemic across the globe. Africa reported COVID-19 cases as follows: on 28<sup>th</sup> May 2020, Uganda confirmed 317 cases with no reported deaths; on 28<sup>th</sup> May 2020, South Sudan confirmed 806 cases with 8 people reported dead; on the same date, Somalia's confirmed cases were 1,828 with 72 deaths; and on 8<sup>th</sup> March 2020, Tanzania's total cases were 509 with 21 cases of deaths (Saleh, 2020).

COVID-19 has adverse impacts not only on the health of the people but also on various social and economic sectors

including education, trade, tourism, transportation and agriculture. Various pieces of literature point out that spending weeks at home with limited resources, stimulation and social contact seriously damaged individuals' health and wellbeing by increasing negative internal states, such as fear, anxiety, depression, frustration and irritability (American Psychological Association, 2020; Cellini et al., 2020; Soraci et al., 2020). To cope with the pandemic, governments took severe control measures, including immediate lockdown and strict post-lockdown measures to prevent the second coronavirus wave. In addition, the movements of people were controlled through strict restrictions and social distancing (Abel & McQueen, 2020).

In Tanzania, the pandemic caused fear, stress, depression and frustration due to prolonged sickness, deaths and the effects of lockdown such as limited socialization, and closure of businesses and schools (Saleh, 2020). The closure of schools severely affected finalist students who depended totally on face-to-face teaching and learning. Some of the typical examples of COVID-19 effects on finalist students include failure in completing syllabus due to prolonged school closure and barriers to remote instruction which was a new phenomenon (Hammerstein et al., 2021, Government of Ghana, 2021). The use of Information and Communication Technology (ICT) which is a form of technology used for communication and transmitting, storing, creating, sharing or exchanging information became one of the tools of mitigating the effects of COVID-19 on students. ICT used in teaching and learning included radio, television, video and mobile

telephones. Computer hardware and software were also used to facilitate the use of technology in electronic mail, text messaging and radio broadcasts ( Ratheeswari, 2018; UKaid, 2020; Cawthera, 2001). Teaching and learning were also through Google meetings, Zoom, WhatsApp, and other online media (Friskawati1, et al., 2020).

Despite the negative consequences of COVID-19 and the coping mechanisms to mitigate the situation and reduce the likelihood of failure among finalist secondary school students, little attention has been paid by researchers to examining the effects of COVID-19 on the finalist secondary school students in Tanzania. Therefore, this study intended to explore the effects of COVID-19 on finalist secondary school students in Tanzania and the coping mechanisms employed by students, teachers and parents to mitigate the effects of the pandemic. According to Peterson (2006) several ICT based interventions of mitigating the negative effects of the pandemic exist. These include institutions, organizations, laws and leader's guidance designed to facilitate development and display of positive traits, which in turn facilitate positive subjective experiences. However, little is known about the effects of the pandemic on finalist secondary schools and the coping mechanisms to avoid national examinations failure among these students. This is the knowledge gap this study intended to bridge. In particular, the study sought to examine the effects of COVID-19 pandemic on O-Level secondary school finalists in Tanzania. The study also sought to establish the mechanisms which could be adopted to cope with the pandemic. To achieve this purpose, two research questions were addressed, i) what

are the effects of COVID-19 pandemic on finalist secondary school students in Tanzania? (ii) what are the possible coping mechanisms schools can adopt to mitigate the effects of COVID-19 on finalist secondary school students in Tanzania?

## **2.0 Theoretical and empirical issues**

### **Psychological Stress Theory**

This study used the theory of psychological stress and coping by Lazarus et al. (Folkman & Lazarus, 1985) and expanded by Carver et al. (1989). The theory points out that stress is experienced when a person perceives that the demand exceeds the social support the person is able to mobilise. This is considered as the transactional model of stress coping mechanism.

The theory presumes that neither the environmental event nor the person's response define stress; rather, the individual perception of the situation is a crucial factor. It assumes that the effect of stress on an individual is mostly based on that person's feelings of threat, vulnerability and ability to cope rather than on the stressful event itself. In the process of coping, critical mediators of stressful person-environment relations and their immediate and long-range outcomes, in this case positive institutions and ICT, are mediators of academic effects resulting from COVID-19 pandemic.

Stress is an unpleasant state of emotional and physiological arousal that people experience in situations that they perceive as dangerous or threatening to their wellbeing. In this case, COVID-19 was perceived as dangerous and threatening to the wellbeing of the people

including secondary school finalist students. On the other hand, coping is the cognitive and behavioural effort to master, reduce, or tolerate various demands (Folkman & Lazarus, 1985). According to Folkman and Lazarus (1985), problem-based coping mechanism comprises a feeling that people are capable of combating the problem. In this regard, one indulges in defining the problem, generating alternative solutions and learning new skills to deal with stressors, reappraise and develop new standards of behaviours. Emotional-based coping mechanism thus may be put into use when it is felt that people cannot manage the source of the problem. It entails strategies such as distancing, avoiding and accepting the problem, seeking medical support and turning to alcohol. This is to say that some strategies used to cope with COVID-19, were consistent with the emotional-based coping mechanism.

### **Effects of COVID- 19**

The eruption of previous pandemics such as HIV/AIDS, influenza, SARS and MERS threatened the lives of people. Generally, these diseases affect patients and their relatives, healthcare staff and all other people who are at risk of the disease (Morganstein, et al., 2017). The reaction of each person to intense stress and fear caused by pandemics can be different. It has been observed that pandemics cause effects such as depression, anxiety, fear of death, losing loved ones, post-traumatic stress disorder, psychotic symptoms and mourning in general (Taylor, 2019).

However, some people can control the negative emotions caused by the pandemics and continue with their lives normally but some cannot and need professional support. Furthermore, like the effects caused by the previous pandemics, COVID-19 brought long-term implications in terms of socio-economic impacts such as school closure, social distancing and loneliness, trade and economic shocks caused by disruptions to distribution channels, inability to provide inputs and services due to quarantine for workers which did not favour the poor majority in Africa who depended mainly on a daily wage to survive Buheji, et al. (2020) and the psychological impact such as fear and anxiety among people due to the uncertainty of the disease. These were complicated by socially disruptive measures such as lockdowns and quarantines (Sood, 2020). Situations such as these can lead to significant psychological and psychiatric disturbances such as post-traumatic stress disorders, depression, anxiety, panic disorders, and behavioural disorders.

### **Coping Mechanisms used to Mitigate the Negative Effects of COVID-19 in Education**

Coping may be conceptualized as how people respond to and interact with problematic situations (Zamble & Gekoski, 1994). Life constantly presents people with situations that can affect their well-being. The way they deal with these situations can determine whether they overcome them or suffer a variety of undesirable consequences. Cohen and Lazarus (1979) define coping as the action-orientated and intra-psychic efforts which are useful in the management of environments. The definition was later revised by Lazarus and Folkman

(1984) to mean the constantly changing cognitive and behavioural efforts invested by a person to manage specific external or internal demands. Different individuals use diverse coping strategies such as emotion-focused strategy and then shift to problem-focused strategy or vice versa.

According to Lazarus and Folkman (1987), problem-focused coping mechanism involves taking steps to change the source of the stress, whereas emotion-focused coping mechanism involves the efforts of changing one's emotional response to the stressor. Problem-focused coping mechanism is a rational approach that attempts to change the situation by changing something in the environment or how the person interacts with the environment. Similarly, problem-focused coping mechanism comprises strategies that deal with the problem at hand or eliminate the stressors through problem solving mechanism. It often enhances the feelings of control and reduces stress and its adverse consequences, believing that the situation can be changed. In this regard, Zamble and Gekoski (1994) contend that individuals with emotion-focused coping style tend to make themselves feel better about a problematic situation without changing the problem itself or the perception of it. In contrast, individuals with problem-focused style tend to actually make changes on their situation or their perception of a situation in order to make it less or no longer stressful. Research indicates that people use both types of strategies to combat the most stressful events (Folkman & Lazarus, 1980).

Governments in the world adopted extreme measures to mitigate COVID-19 outbreak including suspension of all public interactions within cities and closing all transportations within and without the national borders as well as schools, colleges and universities (Lin et al., 2020). Furthermore, quarantine and lockdowns, which are often unpleasant experiences for those who undergo them were used as mitigating measures to combat COVID-19 worldwide. In addition, strict measures were imposed on international travels where individuals were frequently checked on their arrival (The International Organization for Migration, 2020; Saleh, 2020). Despite that literature highlights that once the first COVID-19 case on March 16<sup>th</sup> became evident, the Tanzanian government implemented noticeably less stringent responses compared to her neighbours such as Rwanda which closed her borders and implemented a full lockdown following her first case. On the other hand, Uganda and Kenya imposed a shutdown of economic activities and restricted movements within the country through national curfews. In contrast, in Tanzania, enterprises were allowed to operate and citizens were not restricted from attending religious gatherings but in observation of social distancing rules; while schools, universities, and other miscellaneous mass gatherings were closed. The public was also urged to maintain social distancing, wear face masks, and maintain sanitary habits.

The Government of Tanzania additionally [closed all international borders](#) and suspended international travels in early April 2020 and introduced a mandatory [fourteen \(14\)-days quarantine at the point of entry](#) in government-

designated facilities. Furthermore, prayers and the use of traditional remedies including taking lemon tea, steam therapy, physical exercise, and drinking ginger were emphasized as some of the ways of curbing the deadly virus (Paschal & Mkulu, 2020). Unlike other countries where quarantines and lockdowns were so extensive, in Tanzania, such measures lasted for three (3) months only. Several criticisms were directed at the country as she reopened her borders (Saleh, 2020). While directing criticism at creative and innovative measures taken by Tanzania to mitigate COVID-19, one has to carefully think about the potential benefits of mandatory mass quarantine, total and prolonged lockdown against the possible costs that the country and her citizens including finalist students are likely to encounter.

*Furthermore, there are negative consequences of quarantine and lockdown as pointed out by Brooks et al. (2020) that include separation of people from their loved ones, the loss of freedom, uncertainty over disease status, and boredom. It can thus be argued that Tanzania's approach to COVID-19 was unique and portrays the need for governments to form context-specific smart containment strategies and recovery plans.*

George et al. (2016) researched on the perceived stress and coping mechanism used by medical students of a private medical college in south India focusing on determining the association between different socio-demographic factors and perceived stress levels. Using the Brief COPE scale, they found out that various coping

mechanisms were used by students at the time of stress including acceptance, self-distraction, active coping, denial and substance use. The use of emotional support, religion, planning and self-blame are other coping mechanisms widely used to counteract stress (George et al., 2016; Singh & Madan, 2017).

George et al (2016) recommend the formation of peer counselling groups in all medical colleges to enhance students' use of relevant mechanisms in times of stress. Religion strengthens coping aspects and people use religious methods of coping to find meaning, gain control, comfort and closeness to God. They also use it to gain intimacy with others and closeness to God, and to achieve a life transformation. Empirical studies have demonstrated that many people turn to religion as a resource in their efforts to understand and deal with the most difficult times of their lives. Research also demonstrates that religion can be an invaluable factor in instilling and facilitating positive coping, psychological well-being, and resilience (Singh & Madan, 2017). A strengths-based approach allows for more than one recipe for student success because students acknowledge, concentrate, and recognize their strengths and motivations thus leading them to greater academic success (Louis & Schreiner, 2012).

Positive psychology entails three main pillars, namely; positive emotions, positive character traits associated with good living and positive institutions that create favourable conditions that enable people and groups such as students and institutions to flourish (Gable, & Haidt, 2005;

Seligman & Csikszentmihalyi, 2000). Nevertheless, research has so far been concentrating on positive emotions and character strengths. Enabling institutions has been the least well-studied aspect (MacIntyre & Mercer (2014). During the previous pandemics and epidemics such as Zika, severe respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), HIV/AIDS and Swine flu, governments imposed various control measures including quarantine and isolation, physical distancing, movement restrictions and closure of schools, services and non-essential businesses (Gable, & Haidt, 2005). Other coping mechanisms included behavioural activation, distraction, and social support (Wasil et al., 2021). Furthermore, in the context of pandemics such as COVID-19, and school closures, the use of paper-based and digital distance education platforms became essential to the continued provision of education for all.

Nevertheless, the literature indicates that some coping mechanisms may cause fear and a sense of insecurity (Abramowitz et al., 2002; Ahorsu et al., 2020). As Salkovskis (1991) and Zickfeld et al. (2020) observe, in the efforts of reducing anxiety and gaining certainty about health status, individuals often engage in safety-seeking behaviours including searching for health-related information on the internet. It could be said that people respond by taking measures to protect themselves and others from the virus (Zickfeld et al., 2020) and that spending more time following news of the COVID-19 pandemic is associated with increased anxiety (Ghazawy et al.,2020).

Based on the reviewed literature, there are a few studies to date which have specifically examined the effects caused by COVID-19 on the O-level finalist secondary school students in Tanzania. This also include how information and communication technology, and positive institutions were used by finalist students, teachers and parents to cope with negative effects of the COVID-19 Pandemic. This study, therefore, strived to bridge this knowledge gap.

### **3.0 Research methodology**

A qualitative research approach and phenomenological research design were used to understand the phenomenon. According to Heotis (2020), descriptive phenomenological research design entails capturing a vivid and precise description concerning the perception of the lived experience and can lead to understanding the essence of the phenomenon under study. On the other hand, the interpretive phenomenological research design is concerned with studying the lived experience whereby meaning is embedded in the experience. As such, one's experience of the phenomenon and how meaning is made from it can be understood by means of interpretation. The study is interpretive phenomenological as it examines the effects caused by COVID-19 on finalist secondary school students in the perspectives of students, parents and teachers. As argued by Davidson et al. (2013) and in a descriptive manner using data from interviews and observations, the study captured data from those affected by the phenomenon. Interviews were conducted to teachers, students and their parents to collect information on the effects of COVID-19 on finalist secondary school students in Tanzania. Interviews also collected information on coping mechanisms employed by students, teachers and parents to mitigate the effects of the pandemic.

Moreover, to avoid the chances of offending participants, a non-participant observation was used in collecting data. This was done within a period of one month (during the first phase of the pandemic) to observe students, teachers and parents as they were struggling to combat the effects

of COVID-19 using different coping mechanisms. Observations were made in their homes, internet cafes and stationeries as these were mainly places where students, parents and teachers were found downloading materials or photocopying lesson notes.

The study was conducted in Dar es Salaam, Dodoma and Mwanza Cities because these are among the places in Tanzania with a relatively high population and a big number of secondary schools hence, the likelihood of high threat to COVID-19 infections. Though there are other regions such as Arusha, Kagera, Kilimanjaro and Kigoma with relatively higher populations and a big number of schools, the study was confined to Dar es Salaam, Dodoma and Mwanza as capital and commercial cities respectively thus the places were expected to have more chances for interaction and thus more cases of COVID-19 infection. The population and the total number of schools for each region in Tanzania are indicated in Table 1.

***Table 1: population and total number of schools for each Region in Tanzania***

<b>Region</b>	<b>Population Census (C) 2012-08-26</b>	<b>Population Projection (P) 2020-07-01</b>	<b>Number of Secondary Schools 2020</b>
Arusha	1,694,310	2,104,100	260
Dar es Salaam	4,364,541	<u>5,401,800</u>	<u>335</u>
Dodoma	2,083,588	<u>2,647,400</u>	<u>222</u>
Geita	1,739,530	2,434,800	137
Iringa	941,238	1,149,500	181

<b>Region</b>	<b>Population Census (C) 2012-08-26</b>	<b>Population Projection (P) 2020-07-01</b>	<b>Number of Secondary Schools 2020</b>
Kagera	2,458,023	3,238,300	261
Katavi	564,604	805,900	49
Kigoma	2,127,930	2,800,900	193
Kilimanjaro	1,640,087	1,951,300	344
Lindi	864,652	1,025,800	130
Manyara	1,425,131	1,873,100	165
Mara	1,743,830	2,391,800	236
Mbeya	1,708,548	2,204,500	242
Morogoro	2,218,492	2,730,100	250
Mtwara	1,270,854	1,478,900	153
Mwanza	2,772,509	<u>3,826,600</u>	<u>293</u>
Njombe	702,097	837,600	123
Pwani [Coast]	1,098,668	1,325,900	193
Rukwa	1,004,539	1,270,000	95
Ruvuma	1,376,891	1,655,400	205
Shinyanga	1,534,808	1,993,600	151
Simiyu	1,584,157	2,304,200	157
Singida	1,370,637	1,705,200	164
Songwe	998,862	1,278,900	120
Tabora	2,291,623	3,081,300	194
Tanga	2,045,205	2,449,200	290
<b>Total</b>	<b>44,928,923</b>	<b>57,637,600</b>	<b>5,143</b>

Source: URT, 2020

A total of 36 research participants including twelve (12) students, twelve (12) teachers and twelve (12) parents were purposefully sampled and using snowball strategy in which the identified teachers assisted in recruiting students and their parents. Thus, 12 participants from each city and four for each category of participants provided the relevant data. Saturation of information was reached since qualitative studies focus on in depth inquiry to

exhaustively understand the problem. Data were collected through face-to-face interviews and telephone interviews were conducted for participants who were not willing to be interviewed through face to face due to social distancing policies and compliance with strict observance of the government instructions on minimizing unnecessary interactions during the pandemic. The interview guides were prepared in English and translated into Kiswahili (the national language) with the aid of a Swahili expert. All interview sessions were conducted in Swahili to avoid communication barriers and data distortion. Face to face interviews were audio recorded using a voice recorder and telephone interviews were voice recorded by a smart phone. All audio records provided a verbatim record of the responses but were complemented by taking notes. Snowball sampling strategy was used to sample students, teachers and parents. Teachers who were formerly identified helped to recruit their fellow teachers as well as students and parents. Snowball was deemed relevant due to the fact that students and teachers were not easily accessible following the closure of schools and so the possible way was to get them by identifying few who provided their physical and telephone contacts. Observation was used to collect pertinent information on coping mechanisms used by the students. Trustworthiness and credibility of the findings were achieved and maintained using triangulation of data collection tools and thick description involving the use of quotations from the participants. Ethical considerations were observed including briefing the research participants about the purpose of the research before getting their informed consent. They were also assured of

confidentiality and privacy in the report; hence, anonymity was used to shield the identity of the participants.

#### **4.0 Results Effects of COVID-19 Pandemic on Finalist Secondary School Students**

The study sought to explore the effects caused by COVID-19 on finalist secondary school students in Tanzania. The findings showed that fear, stress, and confusion were the effects which led to interruption on learning and pressure on students and teachers to cover the topics in the syllabus.

##### **Fear**

It was evident that during the COVID-19 pandemic, students, teachers and parents were gripped with fear due to several negative consequences related to the COVID-19 pandemic. The informants indicated different areas of concern such as fear of failure to cover the syllabus by both students, teachers and parents, fear to be infected with the corona virus by both students, teachers and parents, and fear of the forthcoming national examinations by both students, teachers and parents, fear of prolonged parenting tasks during COVID-19 vacation mainly by parents, and fear of losing jobs mainly by teachers. In this regard, one of the interviewed finalist students had the following to share:

*I have much fear especially about the coverage of the syllabus because of the limited study time caused by the pandemic. The duration for preparations to sit for national examinations is shortened and so*

*things pile up causing fear about my fate in the final examinations (Interview with a finalist student A, 6<sup>th</sup> May 2020).*

When asked the same question on the effects which have been caused by COVID-19 on finalist secondary school students, one of the interviewed parents had this to say,

*The students are seized by fear of failing their national examinations, but as a parent, my great fear rest on the fact that I had paid a lot of money for school fees and the children are out of school for an uncertainly long period. Children could not study easily at home; even if you draft a timetable for them, they would hardly follow it (Interview with parent A 6<sup>th</sup> May 2020).*

Another parent noted that their fear emanated from the parenting task during the prolonged stay of their children at home without much work to do. The following quote attests to this position,

*We are worried due to the prolonged stay of children at home without much work to do. Therefore, we fear that the children might engage in indiscipline cases especially female children who are vulnerable to early pregnancy (Interview with parent B, 10<sup>th</sup> May 2020).*

A teacher who participated in this study had a different view about fear as an effect which had seized them as teachers during the pandemic. To him, fear rested greatly on the outcome of his employment and the sustainability of receiving a salary without working. The following quote exhibits this view:

*Our fear is based on the worry about what would happen if the pandemic persisted. Failure to work for six months consecutively, for example, would make us receive half our salary as per standing orders and other available employment regulations. As for the school management team, fear rests on the future students' performance in national examinations (Interview with teacher B, 10<sup>th</sup> May 2020).*

Another teacher informant from a private school shared a similar but slightly different view as she associated her fear with the sustainability of receiving a salary without working and her concern with teachers who had no Smartphones, who, in her observation, suffered even much more. In her own words, the teacher informant said,

*The extended lockdown is fearsome for us since those who fail to prepare question packages are not given their salaries. One of our fellow teachers did not receive last month's salary due to his failure to prepare and send question packages to students. He does not have a smartphone but failure to get*

*a one-month salary awakened him and had to go to school to type the questions on the computer and give them to the academic master who in turn sent them to the respective parents for students to do (Interview with teacher C, 10<sup>th</sup> May 2020).*

The study findings revealed further that fear caused by the COVID-19 pandemic was a result of several reasons and varied among individuals. Furthermore, teachers, students and parents held common and different perspectives about what they perceived as a threat to them concerning the pandemic. However, on its positive side, as it was noted by this study, the pandemic awakened creativity, innovation and effective use of the available resources.

### **Stress**

Stress was also revealed as one of the effects that faced students, teachers and parents as a result of COVID-19. During interviews with teacher informants, one of them said,

*As a teacher, I have stress caused by thoughts about the load which keeps on piling up and how I could accomplish the syllabus when the school reopens. My stress is also on how to enable my students to sit for the national examinations with confidence despite the time lost (Interview with teacher A, 14<sup>th</sup> May 2020).*

Students, parents and teachers were also stressed due to uncertainty regarding the school completion of the finalist students. In this regard, one of the parent informants revealed the following during the interview,

*We are seized with fear about whether the finalist students would manage to sit for their national examinations or study their Form Four in the subsequent year, 2021. Our fear is also based on the capacity and likelihood of schools to accommodate Form Three students who would also be in Form Four by 2021. I know that there is a serious concern about resources in terms of classroom spaces and the availability of enough teachers (Interview with parent D, 16<sup>th</sup> May 2020).*

The study findings revealed that stress seemed to be caused by fear of whether students and teachers will cover the syllabus, the accumulated load due to time lost during the pandemic and the students' ability to sit and pass the forthcoming national examinations. All these made students, teachers and parents devise ways of mitigating the pandemic.

### **Confusion**

It was evident that the COVID-19 pandemic brought about some kind of trauma and confusion among finalist students, teachers and parents. The findings generated from the interviews with students, teachers, and parents supported this fact. Responding to the interview question asked about the effects caused by COVID-19 on the finalist secondary school students, a student informant said,

*As finalist students, we are confused with the new modality of studying using ICT, especially receiving materials through WhatsApp, emails and blogs. Relying on the new modality is difficult due to several challenges associated with it such as lack of air time bundles, poor networking and printing facilities (Interview with finalist student C, 18<sup>th</sup> May 2020).*

Based on the study findings, we can argue that unlike other places of the world which were severely hit by the pandemic, the problem of stigma was less pronounced in Tanzania. The major effects of the pandemic thus rested on fear, stress, and confusion. Similar findings are reported by Fura and Negash (2020); writing on social and economic challenges emerging from COVID-19 they noted,

*Challenges believed to be COVID-19-related problems include worrying about families and friends' health, discomfort to the condition of staying at home, detachment from social gatherings, fear of getting their friends back, feeling of isolation, and loneliness.*

It could thus be argued that fear, stress and confusion characterised almost everyone including finalist students, parents and teachers. Fear of being infected and infecting others resulted in stress and confusion.

### **Interruption to Learning**

All categories of informants reported that the COVID-19 pandemic caused interruption of learning among finalist students. Regarding this, one of the student informants had the following to say,

*As finalist students like other students, we are missing group discussions, remedial classes, consultations and face-to-face interaction with our teachers and amongst ourselves. We further lack supervision in doing our assessments (Interview with finalist student D, 18<sup>th</sup> May 2020).*

Despite the observed interruption to learning among finalist students, there were mechanisms which were used by schools to mitigate the negative academic effects of the pandemic. It was evidenced that teachers provided learning materials using online means such as WhatsApp, emails and blogs.

The utility of WhatsApp and other e-learning media in coping with the anticipated negative effects of the pandemic was highly critical. A similar finding is reported in a study by Abbasi et al.(2020) who point out that the overall reasons for the acceptability of e-learning

rested on the flexibility and better control over the environment in terms of making communication possible.

### **Coping Mechanisms**

The researcher wanted to know the coping mechanisms against the effects of COVID-19 used by finalist secondary school students. The findings indicated the use of ICT and positive institutions and communities were among strategies which were being used. These strategies are presented and discussed below.

### **Information and Communication Technology**

Almost all research participants agreed that ICT was a mechanism used by finalist students to overcome the anticipated negative academic effects during the COVID-19 pandemic. Sharing the mechanisms they used to cope with the pandemic and ensure that studies went on, one of the teacher informants said,

*To cope with the pandemic, we were challenged by the school administration that we should be more creative and use the available alternatives within ICT, especially WhatsApp groups, emails and blogs, as a vehicle to exchange materials, assignments, quizzes, tests and exercises with our students (Interview with teacher D, 20<sup>th</sup> May 2020).*

Explaining the usefulness of ICT during the COVID-19 pandemic, another teacher said,

*Soon after the announcement of the pandemic, the government launched learning through ICT. Expert and competent teachers were hired to teach using TV stations such as Azam, TBC, ITV, and Star TV. We send home packages to students through WhatsApp groups, in which the parents print the study materials and questions for students (Interview with teacher C, 18<sup>th</sup> May 2020).*

Likewise, some student informants pointed out a variety of ways which were used to cope with the pandemic. WhatsApp, radio, television, video, emails, school blogs and mobile telephones were used to minimize the effects and the vulnerability of students to fail in their national examinations. Sharing his experience during the COVID-19 pandemic one interviewed student had the following to say,

*I receive question packages sent by teachers to my parents and my father would print and give them to me. I normally copy and answer the questions in my exercise books. My mother takes photos of my work using her smartphone and sends them to the teacher through WhatsApp for marking. This strategy together with radio, television, video, emails, school blog and mobile phone calls as well as sending text messages to my teachers helped me a lot (Interview with finalist student D, 20<sup>th</sup> May 2020).*

Based on the findings of this study, it can be argued that the use of ICT in the form of WhatsApp, radio, television, video, and emails were very utilitarian. Further, as few schools especially private schools, managed to use teleconferencing while the

majority of the public and rural schools did not afford some strategies such as teleconferencing or having a school website. We could therefore argue that the digital divide was based on the type and location of the school. Students who benefited much from this way of learning were the ones whose parents had smartphones, those with access to reliable internet connectivity, those with electricity in their homes and those who were capable of purchasing internet bundles from cell phone companies. This observation concurs with the observation by Abbasi et al. (2020) who revealed that the majority of the students preferred face-to-face teaching to e-teaching; thus, few of them used mobile gadgets for their e-learning. On the whole, WhatsApp seemed to be a popular way as those without smartphones could get study materials through a neighbour thus, in the long run, each student and parent resorted to the convenient and affordable ICT alternative.

During the interviews it was revealed that some schools had arranged for a special day for parents to go and take the package of materials for their children to study and do some assignments. The schools also identified specific stationeries for parents to go and pick the study materials. The interviewed parent had the following to narrate,

*For us who have no smartphones, we normally go to school and pick the package materials including assignments, notes, and past papers for our children to study. We have been given a schedule for picking and collecting the packages (Interview with parent E, 24<sup>th</sup> May 2020).*

The findings from observations further validate the findings that there were various ways in which students were coping with the pandemic. Students were observed, downloading and printing, reading and working on the materials contained in the packages sent by their teachers through available online means. In most cases, however, much of the printing and photocopying were observed to be done by parents.

These findings concur with the findings in a study by Canale et al. (2020) who revealed that virtual communications can facilitate social support among individuals living in home confinement. Online social support can be provided at any time and shared beyond geographic boundaries

The findings of this study have indicated that finalist students were not made vulnerable by the pandemic as ways for coping using ICT and positive institutions and communities were in place and utilised. Despite the noted challenges in using ICT such as the lack of digital divides among students, families and schools, the students were able to cope. Similarly, the study noted that more ICT avenues such as zoom, Skype, email and video conference were not fully utilized in Tanzania during the pandemic. This calls for more investment in teachers, students and parents so that diverse ICT avenues may become useful not only during times of emergency but as a way of diversifying the available teaching and learning tools in non-emergency times.

### **Positive Institutions and Communities**

There were research participants who pointed out that positive institutions and communities in the form of guidance and counselling were crucial mechanisms which

mitigated the negative psychological and academic effects caused by the pandemic. During interviews with teacher informants, one of them insisted,

*We use guidance and counselling to encourage students to study together. In this way, we address the problem of stigma by counselling students to refrain from fear. We capitalize on the president's call to put fear aside and rely on God while abiding by preventive measures such as the use of necessary safety and cleanliness items like hand sanitisers, soap, disinfectants, and protective masks (Interview with teacher D, 16<sup>th</sup> May 2020).*

Based on the study findings, it could be said that positive institutions offered a means how to handle the situation. The findings indicate that counselling can be used as a mechanism of assisting students to refrain from fear particularly by capitalizing on the need to rely on God when they are in difficult situations such as the COVID-19 pandemic. According to George et al. (2016), religion is one of the coping mechanisms and has been used worldwide in counteracting fear and stress. The findings that people relied on God to combat the pandemic are akin to what Zamble and Gekoski (1994) observe that there some individuals opt for the emotion-focused coping style and tend to make themselves feel better about a problematic situation without changing the problem itself or the perception of it. It also reinforces the fact that individuals with problem-focused style tends to make changes on their situation or perception of a situation in order to make it less or no longer fearful and stressful.

Similar findings are reported by other scholars, for example, Singh and Madan (2017) state that religion can be an invaluable factor in instilling and facilitating positive coping, psychological well-being, and resilience all of which reduce fear and provide comfort in times of grief. Religious involvement also appears to have physical-health benefits for those infected.

Despite that the diseases may be different, and the fact that people all over the world are all facing a global threat, the coping mechanisms such as the use of religion are likely to be the same to all people the world over regardless of their religious affiliations. Furthermore, the findings that there were a variety of coping mechanisms such as the use of ICT and positive psychology employed to pull the finalist students out of the vulnerability to COVID-19, reinforce what Folkman and Lazarus (1985) see in the problem-based coping mechanism as having feelings that we are capable of combating the problem.

## **Discussion**

This study has revealed that life constantly presents people with situations that can affect their well-being. Diseases such as the COVID-19 pandemic are one such situation. Based on the reviewed literature and the study findings we establish that the pandemic led to the evolvment of a weekly provided learning package whose challenge lay in its supervision. Adults could do for students, yet it served as a mechanism for keeping students busy. Time management for students was another problem since not all parents managed to keep

children busy; some were even seen roaming around. Yet those who utilized properly this innovation, they were able to mitigate the academic effects of the pandemic.

A variety of coping mechanisms has been established including a problem-focused coping mechanism which entails taking steps to change the source of the stress. In this regard, coping involves the suspension of all challenges (Lin et al., 2020). On the other hand, emotion-focused coping involves efforts to change one's emotional response to the stressor. Thus, with this mechanism, it is no wonder to find people relying on religion as a means of overcoming stress resulting from the COVID-19 pandemic (Balasubramanian et al., 2016; Singh & Madan, 2017). On the whole, the coping mechanism employed may determine whether one overcomes or suffers from undesirable consequences of the pandemic.

The findings that students, parents and teachers took steps to combat to cope with the COVID-19 pandemic through ICT and positive institutions are consistent with the theory of psychological stress and coping by Lazarus and his colleagues which emphasizes the ability to cope in situations of stress (Folkman & Lazarus, 1985).

The results of this study have initiated a debate on how information and communication technology, positive institutions and communities could be used in coping with the effects of the COVID-19 pandemic. While the utility of ICT was apparent in enhancing teacher-student and teacher-parent communication through emails, WhatsApp, downloading lesson materials and so forth, it had bottlenecks such as lack of and unreliable electricity, especially in rural settings, poor connectivity to internet and incapability of some people to purchase internet bundles. Furthermore, even though not all children had access to radio and TV, this mechanism was useful to the majority of them. Radio could also be more useful for arts and language subjects, while the TV was inclusive – catering for both arts and science subjects. Based on the words of the teacher informant, the following extract was captured to validate the point at hand,

*Complementary measures to ICT were devised for example, schools were given posters from the District Executive Director's office on which they took photos and sent to parents so that they could learn about the precautions and measures against the pandemic thereby contributing to mitigating massive infections.*

It appears that similar strategies might have been put in place in various nations. However, due to the presence of the aforementioned bottlenecks, these strategies could work more in developed than developing nations. Positive institutions in the form of encouragement, relying on God and adherence to health personnel directives including hand washing, social distancing, use of sanitisers, wearing masks and controlled travel seemed to be feasible COVID-19 pandemic coping mechanisms. Arguably, the mechanisms employed proved useful in making finalist students manage to perform well in their Form Four National Examinations amidst the dreadful pandemic.

## **5.0 Conclusions**

Based on the findings of this study, it can be concluded that the COVID-19 pandemic caused serious negative effects such as fear, stress and confusion. These led to multiple academic effects such as interruption to learning, pressure on students, teachers and even parents who were worried as to whether their children would cover the topics in the syllabus. It can also be concluded that successful use of ICT and positive institutions reduced as far as possible, the anticipated negative academic effects on the finalist students.

The 2020 Secondary Education Examination results released by the National Examinations Council of Tanzania (NECTA) showed that the candidates' passing rate had increased by 5.19 per cent compared to how it was in 2019. Similarly, the quality of passing had increased by 3.09 per cent, evidencing the argument that the finalist students were not made vulnerable by the pandemic since some coping mechanisms such as positive institutions and ICT were in place and were effectively used.

Despite the noted increase in the pass rate partly due to coping mechanisms put in place, embracing more digital teaching and learning in addition to the face-to-face mode is highly recommended. Again, conducting training for teachers on the effective use of ICT tools in the teaching-and-learning process in the post-COVID-19 crisis is also highly desirable. The need for the preparations of digital textbooks that have interactive video examples, models, and practice tests cannot be overemphasised.

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