INFLUENCE OF COVID-19 PREVENTIVE MEASURES ON PSYCHOLOGICAL WELL-BEING OF KENYA CERTIFICATE OF SECONDARY EDUCATION 2021 CANDIDATES IN MOMBASA COUNTY KENYA

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A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF LAW ARTS AND SOCIAL SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS (COUNSELING PSYCHOLOGY) OF KENYATTA UNIVERSITY.

NOVEMBER, 2023

DECLARATION

This research project is entirely original to me and has not been submitted to any other university for assessment.

Signature..... Date.....

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This research project has been presented with my consent as the University Supervisor,

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DEDICATION

This work is dedicated to my parents, Mr. & Mrs Gachungi. who placed in me a desire to pursue knowledge and instilled in me the values of hard work and persistence. I also dedicate this endeavour to my sons, Ernest and Brian, as a sign that the pursuit of knowledge liberates the mind.

ACKNOWLEDGEMENTS

I acknowledge with gratitude my supervisor, Dr. Ndirangu Simon, for walking with me throughout this academic journey and being not just an academic shoulder but also a mentor.

I appreciate my lecturers at Kenyatta university Mombasa campus for their inspiration and encouragement; the support accorded me was invaluable in the drive to complete this work.

I appreciate my two classmates, Nereah and Leonard for the moral and academic support throughout the course of our studies and especially in project work. The periodic checking on each other has been a motivation to keep pushing on till the end.

I appreciate the support given by my husband Khudnick Mochorwa for creating an allowing and conducive home environment for me to pursue my career interests.

I also appreciate my sisters for constantly following up to keep me on track so that I complete this masters degree.

May God bless you all.

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ABBREVIATIONS

ANOVA	:	Analysis of Variance
COVID-19	:	Coronavirus Disease 2019
EFS	:	Enterprise Feedback Suite
HIV	:	Human Immunodeficiency Virus
KCSE	:	Kenya Certificate of Secondary Education
NACOSTI	:	National Commission for Science Technology and Innovation
OFGD	:	Online Focus Group Discussion
PWB	:	Psychological Well-being
SDT	:	Self Determination Theory
SPSS	:	Statistical Package for the Social Sciences
USD	:	United States Dollar

OPERATIONAL DEFINITION OF TERMS

COVID-19: A novel coronavirus first detected in 2019 in China is a disease that affects the human respiratory system

COVID-19 preventive measures; Refer to precautions of school closure, online learning and social distancing taken to protect secondary school students from exposure to and infection with the Coronavirus Disease 2019 virus.

Online learning: Refers to education that takes place over the Internet through online learning platforms like WhatsApp, and other media such as Zoom, and Google meet.

Psychological well-being: Refers to levels an individual liking aspects of their personality; having faith in future outcomes; the ability to make decisions and organize self; a sense of association with others as well as the ability to get moral support for personal gowth

Schools' closure: Refers to the stopping of learning in schools for an undefined length of days which was enforced by the government in an effort to stop the spread of COVID-19

Secondary school candidates: Are the 2021 Kenya Certificate of Secondary Education candidates; who prepared and sat their examination within the period of active coronavirus infection in the country 2020 – 2022

Social distancing Keeping a safe space between oneself and other people as a preventive measure against COVID-19. Includes: non-contact greetings, keeping 1.5 meters physical distance, stay-at-home directives

ABSTRACT

Coronavirus, COVID-19, hit the world late 2019 and heavily in 2020 requiring governments to set in place preventive measure to curb the spread of the virus. Among the measures set were school closures and social distancing. To mitigate the lost school hours, schools resorted to online learning. While several researches had been conducted on the area of COVID-19 preventive measures on psychological well-being, the majority of the studies focused on students in general without being specific to candidates whose psychological well-being might have been affected given the proximity to sitting a summative examination which determined their future careers. To fill this gap in knowledge, this research project was aimed at establishing the influence of COVID-19 preventive measures on psychological well-being among the Kenya Certificate of Secondary Education 2021 candidates in Mombasa County, Kenya. The study's research objectives were: to assess the levels of psychological well-being of KCSE 2021 candidates; to find out the influence of schools' closure; assess the influence of social distancing; and determine the influence of online learning, on the psychological well-being of KCSE 2021 candidates from secondary schools in Mombasa County, Kenya. This study used the ex post facto and the cross-sectional research designs. All the 8840 KCSE 2021 candidates in Mombasa County formed the target population. This study sample size was 384 KCSE 2021 candidates; and 11 teachers who were key informants, one from each of the national, county, Sub County, and private participant schools from Mombasa County. Respondents were sampled through simple random sampling. Collection of primary data was via a questionnaire sent online. The study used descriptive statistics in analyzing data collected and findings were presented in percentages and frequencies. Multiple linear regression analysis was used for inferential statistics Findings showed that the psychological well-beingof KCSE candidates was very unhealthy (42.5%). Analysis of findings also consluded school closure had a negative and significant correlation with psychological well-being of KCSE 2021 candidates. Further results showed that social distancing had a negative and significant correlation with psychological well-being of KCSE 2021 candidates. Additionally, results suggested that online learning had a negative and significant correlation with psychological well-being of Kenya Certificate of Secondary Education 2021 candidates. The study concluded that students access to services offered at school was below average (36.5%) The study further concluded students experience of social distancing was very negative (34.6%). These affected their psychological well-being. Findings of this study may be beneficial to schools' guidance and counseling departments as well as the Ministry of Education in understanding and identifying the psychological needs of secondary school students as a result of COVID-19 preventive measures and thereby enable them to develop strategies to mitigate any negative effects. The Ministry of Education may consider providing outreach counseling services targeted at the candidates. The candidates may also benefit from the knowledge generated and this may inform their seeking psychosocial support to manage any negative effects. The study recommended that, timely assessments of secondary schools students' psychological well-being needed to be done so as to monitor their status. Holistic intervention procedures may also be beneficial to the secondary school students. This therefore calls for combined efforts of psychologists, psychiatrists, and other health practitioners to apply treatment strategies.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

In this chapter the foundation of the study is laid down; the variables, research methods, he population as well as the expected outcome and utility of the outcomes are explored to show the state of affairs and research gap. To achieve this aim, chapter one comprises of the background to the study, problem statement; research objectives and questions; justification and significance of the study; the scope and the study limitations as well as assumptions.

1.2 Background to the Study

Following the coronavirus, COVID-19 epidemic worldwide and spread to our country Kenya, the government enforced preventive measures which included: social distancing, halting of public assemblies, immediate closure of learning institutions, and stoppage of inter-county movements to limit the escalation of COVID-19. Students faced an interruption in their school calendar, a prolonged and uncertain school closure as well as an unnatural and unprecedented environment where there were strict social restrictions meaning that they largely had little or no socialization. With the school closures, KCSE 2021 candidates among other students proceeded home without a clear knowledge of when schools would re-open or what would be the fate of their education. By staying at home, socialization with friends, which helps in dealing with stress, was also limited.

For psychological well-being, three essential needs for autonomy, competence and relatedness are necessary (Ryan & Deci, 2017). Requirements that people avoid social gathering and also isolate if infected with COVID-19 would make it hard to satisfy

psychological needs necessary for Psychological Well-being (PWB) (Brooks, Webster, Smith, Woodland, Wessely, Greenberg, & Rubin, 2020). These measures limit psychological needs for 1) autonomy since staying at home was not autonomously chosen; 2) competence because the situation was not in the direct control of the individual creating feelings of incompetence; and 3) relatedness which is the removal of the social aspect of human living.

It would be expected that relatedness satisfaction, a major component of psychological well-being, would be satisfied by staying at home with one's family. However, this was frustrated because staying at home was not an autonomous choice but a preventive measure against COVID-19. Similarly, COVID-19 preventive measures like social distancing were found to contribute to increased fear and anxiety across the world. A review of researches done on young people across the world on the effect of the curfew effected to stop the spread of COVID-19 found that there were long and short-term mental health effects (Singh, Roy, Sinha, Parveen, Sharma, & Joshi, 2020). Containment measures like prolonged school closures predisposed children and the youth to loneliness, anxiety, and uncertainty thus affecting their psychological well-being. Consequently, the COVID-19 preventive measures posed serious harm to the psychological health of the youth and have led to notable behavioral changes (World Vision, 2020). These studies did not however consider the effect on secondary school candidates preparing for a major examination, which the current study sought to focus on.

Gubric, Badovinac and Johri (2020) study on college students' mental health conducted in Canada among college students argue that students were among a population already experiencing increased stress levels. Education and academic performance contributed to varying levels of stress among male and female students

in both secondary schools and higher education (Pascoe, Hetrick & Parker, 2020). COVID-19 and related preventive measures reduced the ability for students to rely on normal coping strategies like families who were also probably experiencing psychological distress. Without these normal coping methods, the mental and general well-being of students was compromised opening doors to negative behavioural outcomes like substance abuse.

The frustration resulting from daily accumulated stress and unpleasant life events can affect an individual physical and psychological health, which can lead to physical and mental health illnesses like anxiety and depression (Bhurga, Till & Sartorius, 2013). Stress is an important factor affecting psychological health and people encounter many social, cognitive, and physiological stressors in various ways during their daily lives. Njoku and Omeire (2016), describe stress as the situation in which one is about to experience an important life changing event but there is no guarantee of the outcome being in the person's favour. COVID-19 preventive measures presented a constraint to secondary school candidates' desire to complete their studies and transition to higher levels of learning and later job markets. Further, was the uncertainty associated with the threat of school closures intended to stop the COVID-19 pandemic.

In Ghana, there was a notable decline in children's mental health and psychological distress as a negative effect of COVID-19 epidemic (UNICEF, 2020). From 30.4 percent of the respondent households, reports showed children between the ages of 6- and 17 years were mostly sad compared to before the pandemic; 26.0 percent experienced anxiety, 18.5 percent reported being afraid, 15.5 percent were irritated and 13.1 percent distressed. Children faced psychological distress in the heart of a pandemic made worse by the social restrictions targeted at curbing its spread. Matovu,

Kabwama, Ssekamatte, Ssenkusu and Wanyenze (2021) also reported increased psychological health challenges arising from the COVID-19 curfew in a study of 2500 Ugandan teenage boys and young males between 10-24 years old; with 1.2 percent being suicidal. Adolescent boys aged 15-19 years and young boys were more affected. Adolescent youth suffered psychological distress amid COVID-19 preventive measures; these studies did not isolate the adolescents in senior years of secondary school preparing to sit a national examination hence the need to find out how COVID-19 preventive measures influenced this specific population.

In Kenya, it was also evident that the youth were at a risk of psychological distress in an environment where there were outside forces that were brought about by COVID-19 government imposed preventive measures. A report by ChildLine Kenya, an initiative supported by UNICEF whose objective was to provide help on mental health issues through telephone calls, revealed that there was an increase in the number of calls made by children seeking help between the ages of 10-19 years following the initial reports of COVID-19 pandemic in Kenya (UNICEF, 2021). To corroborate this, a study conducted in Kenya by Dyer, Wilson, Badia, Agot, Neary, Njuguna, and Kohler (2020), on COVID-19 and related social distancing effects among 1386 adolescents living with HIV aged between 10-24 years; 9 percent were identified with mild depressive symptoms. Social distancing limited access to medical facilities and therefore they could not get the routine checkups and the medicines adding to their daily lives stress. Their study was limited to adolescents living with HIV and not specific to those preparing to sit a final examination in high school.

COVID-19 preventive measures on, physical/social distancing, quarantine and, isolation, meant that individuals could not spend time with loved ones despite the fear and anxiety resulting from the COVID-19 disease. One study done in China on 1257

medical staff in 34 hospitals, revealed a strain on their mental well-being because of quarantine and isolation, as well as an increased fear for their health or fear of spreading the infection to their family members (Lai, Ma, Wang, Cai, Hu, Wei, & Hu, 2020). Home was expected to be a place of comfort and social support but the pandemic led to an environment where fear of contracting the coronavirus made even parents avoid close contact with their children for fear of infection. The lack of a social aspect arising from the stringent preventive measures contributed to creating fear in the population and a lack of the necessary social support while going through crises like the loss of loved ones or illness in the family. Adolescents especially in high school lacked the needed social support over the school closures and social distancing requirements, necessitating the current study to establish the influence of these preventive measures on their PWB.

Šakan Žuljević and Roković (2020) agree that harsh measures of social distancing such as lockdown and school closure compromised the psychological well-being of the general public as well as among students. Various mental health disorders, like anxiety, depression, and anger, manifested following government-enforced COVID-19 preventive measures. Shi, Roy, Sinha, Parveen, and Joshi (2020) conducted an online study of 571 Chinese participants and concluded that the general Chinese population experienced significant psychological distress manifested largely by fear as an impact of social distancing measures. The concern of contracting the virus, fear of losing loved ones, and for the youth, the attendant fear arising from uncertainties over their future were probable consequences of social distancing. It was therefore necessary for a study that woud look at the candidates' psychological well-being within this background.

COVID-19 preventive measures saw a change and interruption of the normal lifestyles of students. Notably, most families experienced economic constraints arising from the loss of jobs following measures to prevent COVID-19 like physical distancing, travel restrictions, and stay-at-home requirements. This led to increased psychological issues in the general public and the youth, ranging from anxiety, depression, and post-traumatic stress disorder signs (Semo & Frissa, 2020). Studies reveal that this interruption had the potential to impact severely on the psychological well-being of individuals. Ho, Chee, and Ho (2020) in a study of 1738 people obtained from the general public and which was conducted in China revealed that 53.8% of respondents reported being psychologically affected: 16.5 percent experienced some signs of depression; 28.8 percent displayed anxiety signs, and 8.1 percent experienced increased stress. Their study was limited in the use of the general public as the respondents, failing to inform how the pandemic and the preventive measures enforced affected the students specifically candidates in secondary schools.

The significance of the COVID-19 preventive measures that could affect students' psychological health as a consequence of physical socialization limitations and isolation, closing down schools and public places include: anxiety, depression, and stress. Cao, Fang, Hou, Han, Xu, Dong and Zhang (2020) study on the effect of COVID-19 on the mental health of 7,143 medical students in China found varying levels of anxiety: less than 1 percent reported extreme anxiety; 2.7 percent had moderate anxiety, and 21.3 percent had symptoms of mild anxiety due to delays in the academic calendar. COVID-19 preventive measures were associated with psychological distress manifested by stress, depression, and anxiety among student populations.

Studies carried out in Africa showed that COVID-19 containment measures had a significant impact on the populace mental health. In one study carried out among 280 university staff in an Eastern Cape University, South Africa, 27.65% reported psychological distress during the lockdown (Niekerk & Gent, 2021). In another study of Sub-Saharan Africa, it was argued that the influence of COVID-19 preventive requirements of physical distancing on psychological health could be immense since the health care sectors were underdeveloped (Semo & Frissa 2020). In sub-Saharan Africa, physical distancing and the attendant job losses contributed to the rise in psychological disorders like anxiety, depression and post-traumatic stress disorder. Part of the population affected by this psychological distress included the youth, a key part in the growth and development in any society. The studies were not specific to secondary school candidates a section of the youth population that the current study focused on.

Further, the closure of schools by governments meant that students had to adapt to new living conditions and online learning platforms. This led to increases in stress and anxiety in university students across the world (Sahu, 2020). Students experienced anxiety over the continuation of their studies in addition to probable late completion of their studies. Wang, Pan, Wan, Tan, Xu, Ho, and Ho (2020) corroborated Sahu's (2020) projection that the COVID-19 pandemic and requirements to avoid physical social contact worldwide adversely impacted the psychological well-being of the public at large, inclusive of students. These two studies however failed to sample secondary school candidates, making use of university students and the general public hence failing to be exhaustive and specific. The proposed study sought to establish the influence of school closures on the psychological well-being of secondary school KCSE 2021 candidates.

Public health emergencies have been found to subject households to domestic violence. The stay-at-home orders significantly increased the cases of gender-based violence among young people in Kenya. An estimated 6.5 percent and 2.7 percent girls and boys between 10-19 years old were reported to have been sexually abused over the lockdown period (MoE, 2020). TIFA (2020) cited in Barasa. Kazungu, Orange, Kabia, Ogero and Kasera (2020), corroborated this in their findings from a national representative survey; there was a 22 percent rise in cases of gender-based violence against children associated with the physical distancing and stay at home directives during the dusk to dawn curfew in the country. COVID-19 preventive measures presented the young people with physical health and mental health challenges, the extent to which this distress was experienced by older adolescents had not been exhaustively studied.

In another study researching the impact of COVID-19 on learning in Kenya, Nyaga (2020) reported increase in children involvement in vices such as drug and substance abuse, crime especially among adolescent boys, teenage pregnancies, defilement of minors and child marriages due to the extended school closures. Adolescents are a vulnerable group in the society and in a pandemic like COVID-19, they were subjected to physical abuse which also affected their mental well-being, it was, therefore, important to look at this group and establish their psychological well-being as impacted by the preventive measures against COVID-19.

A majority of studies done on the impact of COVID-19 have shown that the mental health of the general population, and of university and college students had been affected by the school closures, online learning, and social distancing. There however was little concentration on secondary school candidates preparing to sit a summative

examination and how the preventive measures for COVID-19 may have influenced their psychological well-being. This study therefore intended to fill this gap.

1.2 Statement of the Problem

The adolescent stage is critical in laying the foundation for future personality and has crucial developmental tasks for determining the adolescents purpose in life, setting career goals and life values. Successfully sitting a summative examination like Kenya Certificate of Secondary Education (KCSE) is key in realizing these goals. Being in the senior years in secondary school was already anxiety-provoking and the adolescent required a conducive school and home environment in order to prepare adequately for the examinations. The COVID-19 pandemic threatened this environment and affected the psychological well-being of adolescents and added to the stress and anxiety already being experienced by this category in the population (Cao et al 2020; Sahu, 2020; Šakan Žuljević and Roković 2020; Semo & Frissa 2020; Wang et al 2020;). The preventive measures of school closures, social distancing and online learning changed the learners environment and brought about fear of stoppage of their education, fear of losing loved ones, and concerns about prepadeness for the examinations.

Psychological well-being can affect the academic outcomes of students, acquisition of social skills and influence human behavior and life choices. When the PWB of the youth is affected by a pandemic, it can result in unhealthy beahaviour like engagement in crime, drug and substance aabuse, and early sexual encounters (Dyer et al 2020; Nyaga 2020).

Efforts by some agencies like the World Bank to curb the negative effect of school closure in Kenya aimed at supporting learning mainly through the expansion of access

and delivery of online content to all learners and smooth transition back to school (World Bank, 2021). Unfortunately, these did not focused on assessing or providing needed psychosocial support to these learners.

Moreover, not much had been done regarding the effect of COVID-19 preventive measures such as schools closure, social distancing, and online learning on the psychological well-being among candidates in secondary schools. Studies that have been conducted have been general on the population with the few narrowing down to students, focusing on college or universities and even fewer studying adolescents.

Adolescence is a key developmental stage where the main tasks include identifying, formation and identification of career paths. As such any interruption to the developmental stage is likely to cause psychological distress on the adolescents at the time and affect them in adulthood. There's therefore the need to make an investigation on secondary school candidates who might have felt the impact of school closure more since their examinations had been affected. The proposed study intended to address the research gap by seeking to find out the influence of COVID-19 preventive measures on psychological well-being of KCSE 2021 candidates in Mombasa County, Kenya.

1.3 Objectives of the Study

This study sought to address the research objectives below:

1. To assess the levels of psychological well-being of KCSE 2021 candidates in Mombasa County, Kenya.
2. To find out the influence of schools' closure on psychological well-being of KCSE 2021 candidates in Mombasa County, Kenya.

3. To assess the influence of social distancing on psychological well-being of KCSE 2021 candidates in Mombasa County, Kenya.
4. To establish the influence of online learning on psychological well-being of KCSE 2021 candidates in Mombasa County, Kenya.

1.4 Research Questions

The research addressed the research questions below:

1. What are the levels of psychological well-being of KCSE 2021 candidates in Mombasa County, Kenya.
2. What is the influence of schools' closure on psychological well-being of KCSE 2021 candidates in Mombasa County, Kenya?
3. How does social distancing influence the psychological well-being of KCSE 2021 candidates in Mombasa County, Kenya?
4. How has online learning influenced the psychological well-being of KCSE 2021 candidates in Mombasa County, Kenya?

1.5 Justification and Significance

COVID-19 altered the way of life for the youth in schools all worldwide and specifically in Kenya. Education was largely been affected by the closure and subsequent suspension of learning and national examinations; the impact would be more on candidates. Unlike adults, adolescents were likely to suffer major psychological consequences arising from the coronavirus pandemic. This age group faces issues like their critical devolopmnetal age, being in a senior class in secondary school, prevailing mental health and economic related challenges. Within this background and the added COVID-19 preventive measures it was, therefore, necessary to find out how the PWB the KCSE 2021 candidates had been affected.

The findings of this study may be helpful to the schools' administrations in developing strategies to address the psychological needs of the secondary school candidates. It may also provide useful information that will help schools' counselling departments in addressing students' psychological needs.

The study would generate knowledge that would empower the understanding and mitigation of any negative effects of COVID-19. The KCSE candidates who were affected by the preventive measures would gain knowledge of possible effects that could have ripple effects on their future. This awareness would help them seek professional help and psycosocial support in case of negative effects of COVID-19 preventive measures on their PWB.

Moreover, this study's findings may prove helpful to the Ministry of Health understanding the psychological well-being of secondary school candidates. The Ministry may consider providing continued outreach counselling services targeted at the youth.

1.6 Scope and Limitations

This study limited itself to determining how COVID-19 preventive measures (school closure, online learning and social distancing) influenced the psychological well-being of KCSE 2021 candidates in Mombasa County, Kenya. The study only targeted secondary schools in Mombasa County, Kenya.

The study focused on Kenya Certificate of Secondary School 2021 candidates who could be accessed on the online platform, via email who studied in Mombasa County, Kenya. A questionnaire developed on Google forms was utilized to collect data which was sent to students through email.

The sample constituted of those who were available and willing to participate in the study. As well, those who were included were those who could be accessed through email. Students who could not be accessed via online were assumed to have had similar responses.

1.7 Assumptions of the Study

This study presumed:

1. Measures to prevent spread of covid-19 (school closure, social distancing, online learning) affected the psychological well-being of KCSE 2021 candidates.
2. Secondary school candidates are able to self report on their psychological well-being.
3. The information provided by the sample respondents applied to all other KCSE 2021 candidates in Mombasa County, Kenya.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

The section comprised a survey of literature relevant to the research objectives and topic. The theoretical framework was highlighted first, followed by the empirical literature, the summaryof literature, and finally the conceptual framework.

2.2 Empirical Literature Review

2.2.1 Levels of Psychological Well-Being among Adolescents

Adolescents are at a critical developmental stage where they are setting goals in life, value sysems amd forming identifty. Involvement in physical acivity has been associated with improved psychological well-being among Pakistan school adolescents aged between 12-18 (Khan, Taghdisi, & Nourijelyani 2015). This study showed that in 65 percent of the Pakistan households sampled, there was an adolescent. By engaging in physical activities adolecents were able to avoid stress and improve overall self-esteem. In the present study the researcher focused on COVID-19 preventive measures which limited the adolescent candidates social interaction and curtailed any form of physical activity. The study sought to find out if the prevailing circumstaces affected the candidates' PWB.

The psychological well-being of adolescents affected their optimal functioning later in adulthood; when the PWB of adolescents is poor it affects their mental health when they get to adult stage (Yousefi & Hasani 2022). This study was conducted among 14,000 Iranian adolescents in elementary school and high school; it reported that an adolescent's self compassion and cognitive flexibility were significantly correlated to PWB. The study showed that adolescents' PWB once affected would persist into

adulthood. The currect study focus was on establishing the levels of PWB of KCSE 2021 candidates as influenced by COVID-19 preventive measures as well as seeking to find out if these levels persisted after sitting the KCSE ecxamination.

The PWB of adolescents is negatively influenced by the economic status of the adolescent's family. according to a study conducted on adolescents with a mean age of 15 in China, the severity of the psychological distress was influenced by factors like the adolescent's self esteem and level of victimization and their interplay with the poverty status (Jiang, 2020). The study focused on the PWB of adolescents as influenced by povery, peer victimization and self-esteem. The current study sought to focus on adolescent candidates and the influence of COVID-19 preventive measures on PWB.

2.2.2 Schools' Closure and Psychological Well-Being

Larsen, Helland and Holt (2021) studied the effects of school closures and social isolation among Norwegian children in low-income households; the study's focus was the children's emotional reactions during the coronavirus COVID-19 pandemic. The study looked at how variables connected to COVID-19, such as schooling at home, family stress and instability, time spent on screen, socialization with friends, and anxiety over infection, were linked to children's psychological reactions, perception, and fear. A sample of 442 children took part in the study, the study used linear regression models to control for background characteristics such as the psychological sensitivity of the children. The variables associated to COVID-19, with the exception of time spent on screen, revealed significant relationships with the three outcomes. The consequences of family stress and instability were the most pronounced. The study, however, did not focus on adolescents who were candidates, necessitating the current study to establish the effect on candidates.

In Japan, Ishimoto, Yamane, Matsumoto and Kobayashi (2020) investigated the influence of shutting down of schools on children's psychological well-being. Young learners from three elementary schools were studied for mental health indicators such as emotional symptoms, as well as conduct throughout the period schools were closed and apprehension over resumption of school. The information was gathered in December 2020 through the utilization of questionnaires sent to parents and returned by mail. There was no general deterioration of psychological disorders as compared to pre-survey data, according to the analysis. Because of the school's unexpected and unprecedented shutdown for an unprecedented period, children who were more apprehensive about returning to their normal lives experienced more severe emotional issues. The study was conducted on preadolescents in elementary school, therefore the results may differ from those of high school candidates in middle to late adolescence hoping to advance to the next level of schooling the following year. As a result, the applicants may have faced psychological issues that were distinct from those encountered in elementary schools, necessitating the current research.

Schwartz, Exner-Cortens, McMorris, Makarenke, Arnold, Van Bavel and Canfield (2021) assessed COVID-19's effect on learners 'stress and mental health throughout the resumption of school period. 2,310 Alberta students aged 12 to 18 participated in the study. In the early weeks of September, students participated in an online survey on giving their views of COVID-19, the experience of resuming school after the closures, stress related to the pandemic, and general performance. Students were anxious over personal health, isolation in the family, and inability to socialize in moderate to equal amounts. The students' level of stress were above crucial points in 25 percent of the sample. Girls and teenagers within 15 -18 age bracket reported higher stress indicators than younger boys aged 12–14 years old. Stress indexes had a

significant positive correlation with perceived behaviour and stress arousal concerns, according to multivariate analysis. Older adolescents were found to report higher stress, an indicator that this population's psychological well-being was at risk from preventive measures of COVID-19 which therefore necessitated the current study. Though the study was conducted among students in different stages of adolescence of whom some may have been candidates, it was not specific on the psychological effect among those students who were candidates. More so, the study focused more on the effect relating to return-to-schools as opposed to the schools closure targeted in the present study.

Kathula (2020) investigated the impact of COVID-19 on the system of education in Kenya; in a sample of 250 participants consisting of students, teachers, and parents purposively selected from all over the country, it was found that the halting of learning harmed both primary and secondary school candidates who were preparing for the national examination in November 2020. Raw data was collected using questionnaires and interviews administered through online google forms. The findings were that COVID-19 affected learning as most of them were forced to relocate to the rural areas, the most impact was felt by primary and secondary school students who were candidates in the year 2020. The study reported a negative impact due to the interruption of learning hence the need to look at their psychological well-being as affected by school closures.

2.2.3 Social Distancing and Psychological Well-Being

Villani, Pastorino, Molinari, Anelli, Ricciardi, Graffigna, and Boccia (2021) studied the COVID-19 influence on psychological health of 501 Italian undergraduate students. Using a questionnaire sent through the university students' websites, the researchers did a cross-sectional survey immediately after the initial lockdown in the

country. To estimate level of involvement, anxiety, and signs of depression, the study utilized the Self-Rating-Anxiety-Scale, the Patient-Health-Engagement-Scale, and the Self-Rating-Depression-Scale. In the 501 participants in the study, 35.33 percent reported anxiety, and 72.93 percent reported depression. An increase in the incidences of anxiety was linked to not being able to go to university, losing contact with friends, and the lack of physical contact with relatives. The study was however conducted among university students as opposed to the secondary school candidates in this study who may experience different psychological behavior concerning social distancing hence the need to assess this among KCSE candidates as well.

Munawara Shivhare, Kapoor, Singh and Rohilla (2020) looked at the psychological effects of social distancing on young people in India. The survey was done via an online questionnaire distributed to students in Chandigarh in India and the surrounding areas during the lockdown period. 411 people participated in the cross-sectional questionnaire-based investigation (17-25 years). The information was entered into excel sheets and evaluated using relevant statistical methods such as the chi-square test, percentages, and proportions. The findings revealed that the students' life patterns had drastically changed. Stress from controlled movement, loneliness, lack of social interaction, academic loss, and unpredictable future possibilities were among the negative consequences. Although the study was conducted among students aged 17-25 years it did not specify those who were candidates and the specific effects on them. More so, the methodology may differ from the method that will be adopted in the current study.

Over the period of active COVID-19 prevalence, a study was done in Italy on the effect of social separation on Italian’s psychological state and their physical exercise routines; the study revealed major psychological and physical impacts (Corrado,

Magnano, Muzii, Coco, Guarnera, D Lucia, & Maldonato 2020). A sample size of 670 Italian adults took part in an online survey that collected demographic information, 2-week physical and emotional symptoms, any contact with COVID-19, and reports on regular physical activity. Data collected was analyzed using mixed methodologies. More than half of the respondents said the experience had a major psychological and physical impact. The study centered on the impact of COVID-19 prevalence on physical/social isolation and physical exercise habits but was not specific to influence on PWB of students preparing for a summative examination.

COVID-19 and students' pretentious psychological well-being were explored by Li, Hafeez, and Zaheer (2020). Electronic questionnaires were used to obtain data from 640 university students from both domestic and international universities. The results showed that there were considerable negative effects, such as various levels of stress, depression symptoms, and discomfort. The mental health of university students was most impacted by COVID-19, quarantine, self-imposed isolation, and other harsh interventions. The study was conducted among university students and focused on financial instability and the unpredictability of the future as well as media coverage of COVID-19. The present study sought to study secondary achool candidates's PWB and focused on the preventive measures for COVID-19.

Social distancing, as a result of the COVID-19 pandemic, was found to have a significant impact on the psychological well-being and normal lifestyles of Greek university students (Karasmanaki & Tsantopoulos, 2021). Quantitative data from 181 Greek undergraduate forestry students was collected utilizing online questionnaires. According to the findings, university closures and the shift to distance learning had a notable impact on students. Moreover, many felt unpleasant emotions during the lockdown, primarily concern and anger. Male students were more probable than

female respondents to suffer severe negative emotions such as fear, panic, and despair, according to a T-test. The study focused on university students in a 42-day quarantine; in Kenya, the national restrictions on social distancing extended for over four months and persisted even after the return to school for the candidate class in January 2021. It was crucial to find out the implication social distancing might have had on this population's psychological well-being.

2.2.4 Online Learning and Psychological Well-Being

Popescu, Tătucu, and Dobromirescu (2021) were interested in finding out the effect COVID-19 had on the mental health of students engaged in online learning during the pandemic. The research conducted in Rome used interview method with 8 students from the Engineering and Psychology faculties in Romanian universities to investigate the evolution of students' well-being in the current condition of remote participation in University courses using a qualitative research approach. Students are dissatisfied with the lower quality of interactions in the virtual environment compared to the physical one, according to the findings. They also expressed a sense of emotional loneliness. Some experienced depressive episodes, which included worry, frustration, and powerlessness. The study targeted university students' experience of virtual learning, a popupaltion different from the high school KCSE 2021 candidates that the current study based its research on.

During the COVID-19 epidemic, Lischer, Safi, and Dickson (2021) employed a mixed-method inquiry to measure distant learning and students' mental health in Switzerland. A sample of 557 university students participated in the study. Quest back's Enterprise Feedback Suite (EFS) Survey was used to conduct the survey. SPSS Version 22.0 was utilized to analyze the data. ANOVA was used to make a comparison of the means among the various categories of students and was used to

demonstrate demographic and other targeted characteristics of the respondents which included self-reported anxiety and gender. COVID-19 related stresses about the economy, delays in academic pursuits, lack of social aspect of life, general health, and varying degrees of perceived anxiety were investigated using regression analysis (normal, mild, moderate, severe). Concerns about the pandemic's economic impact were found to be positively connected to anxiety levels among college students. Furthermore, anxiety was strongly connected with worries about academic delays or personal health issues, as well as worries about health issues for close family members. Anxiety levels were not linked to fear of losing social contact. The study made use of ANOVA to assess the differences in behaviors among the students of different genders but failed to find link anxiety to loss of social contact. The proposed study aimed at determining whether the loss of physical interaction during learning especially with friends and teachers had any influence on the KCSE 2021 candidates' psychological well-being.

According to Lister, Seale, and Douce (2021), students in distance learning faced hurdles and enablers to mental well-being and academic achievement, the study recruited 21 participants, 16 students, and 5 tutors, using convenience sampling from Open University (OU), which offered distance learning in the United Kingdom. The study used narrative inquiry, where students narrated their stories while the lecturers shared about students they had helped. A mental health illness had been declared by fifteen of the students to the institution while the other student experienced severe depression and anxiety though this was not formally disclosed. NVivo was used to investigate the data inductively. Through the interviews with the tutors, it was found that there were several barriers and enablers to mental health issues, which might be linked to various aspects of the institution or study experience. The study concluded

that, while therapy and personalized approaches to mental health were vital, they scarcely sufficed to guarantee students' mental wellness. The study however dealt with the efficiency of correspondence education as opposed to psychological effects from online learning as was the focus in the current study.

In another study on the influence college students' views of electronic education inefficiencies on their mental health disorders, Hasan and Bao (2020) aimed at getting a measure of perceived electronic learning inadequacies and distress of losing an academic year through online focus group discussions (OFGD) respondents. From the OFGD findings, the researchers designed a questionnaire which was distributed online to the purposively sampled participants. It was found that that the way students' perceived inadequacies in electronic learning had a considerable influence on their mental anguish. Findings also showed that anxiety about academic delays was a major determinant of mental stress over the COVID-19 curfew. The study did not explore student access to or lack of access to online learning, availability of a computer or smartphones, or reliability of the internet among the students, an area of concern for the current proposed study. The present study also sought to collect data from teachers, not just students, on the impact of online earning. The current study used questionnaires developed on Google forms as opposed to online focus group discussions.

Locally, a study on COVID-19 influence on healthcare learning and the disabled in Kenya reported that majority of learners could not access online learning because of the high cost of internet and unavailability of laptops or smartphones (Hasan & Bao, 2020). 78 percent of the Kenyan population domicile in rural settlements which had limited internet access; 70 percent school-going children resided in the rural areas. This study revealed a gap in access to online learning which might have affected the

students, especially the KCSE 2021 candidates' psychological well-being. The current study proposed to fill this research gap.

2.3 Theoretical Framework

In this section there was a discussion of the theory that was used to explain how COVID-19 preventive measures impacted on the PWB of secondary school candidates. This research was anchored by the Self-Determination Theory as discussed herein.

2.3.1 Self-Determination Theory

The Self-Determination Theory (SDT) by Ryan and Deci (2017) describes three basic needs necessary for psychological well-being (PWB). The needs are autonomy, competence and relatedness. The need to be in control of our motivations, behaviour and emotions to deal with social pressures is termed as autonomy. Competence is the need to interact with the environment and make use of available opportunities for success. Relatedness is the need to form strong relationships and develop a sense of belonging to a group. SDT focuses on isolating the social and cultural factors that enable or limit the realization of the basic needs for PWB. Satisfaction with life depends on the psychological needs being met and this enables optimal development in human beings.

SDT also explains the motivations of human behaviour; when an individual is intrinsically motivated it means that internal forces are influencing behavior which is the ideal situation (Ryan, Deci, Patrick, & Williams, 2008). Autonomous motivation for behavior is when people are involved in an activity that they have consciously chosen to do without any outside pressure and that is their choice (Deci, Olafsen, & Ryan, 2017). External factors may motivate behavior but this would reduce the level

of engagement as well as how enduring the behavior is. Self-determined motivation is helped when the natural environment meets the needs for autonomy (being free of external factors influencing behaviour), competence (having the skills and feeling capable to deal with life issues), and relatedness (the sense of belonging to a group and feeling involved with others).

In a school setting, students who have self-determined motivation record higher academic performance (Anderman, & Gray, 2015). Students are driven to learn and achieve when the three psychological needs are met. Thus their actions are intrinsically motivated and performance is improved. The satisfaction of the three needs also contributes to improved mental health. The need for motivation is important for optimal achievement.

Psychological needs satisfaction has been linked to positive behaviour change and better mental health which is reflected in lower depression, anxiety, and improved physical health. The strict preventive measures to curb the escalation of COVID-19 especially social distancing, school closures, and online learning contributed to a controlled environment that does not meet the psychological needs resulting in feelings of distress a few weeks into the pandemic (Šakan, et al., 2020). A person's psychological well-being is achieved when the basic psychological needs are met.

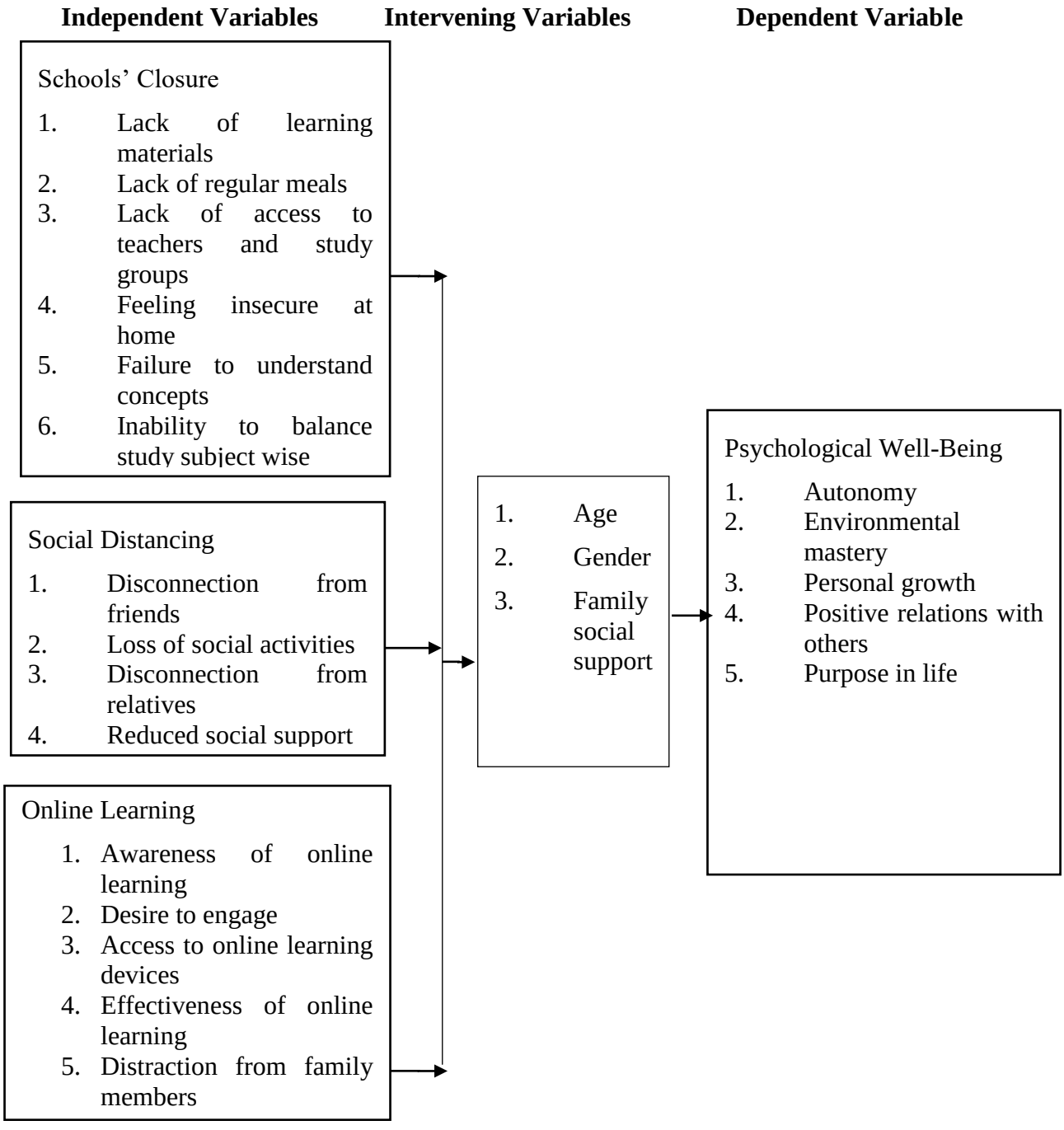
KCSE 2021 candidates were at pressure to prepare adequately for their national examination when the preventive easures disrupted their learning and social environment. School closures, online learning and social distancing affected the self determination needs for connectedness, competence and autonomy which interfered with the candidates' psychological wellbeing.

2.4 Conceptual Framework

As indicated in Figure 2.1 the independent variables are identified as: school closure,social distancing and online learning. The indicators for school closure included: lack of learning; lack of access to teachers; failure to understand concepts; and inability to balance study subject-wise. Social distancing indicators were; disconnection from friends; loss social activites; disconnection from relatives; and reduced social support. Online learning indicators included: awareness, desire to engage and access to online learning; effectiveness of online learning and distraction from family members. These variables affected the dependent variable psychological well-being whose indicators were: autonomy, environmental mastery, personal growth, positive relations with others and purpose in life. Intervening variables of age, gender and family support may have influenced the severity of impact of the dependent variables on psychological well-being.

Figure 2. 1

Conceptual Framework



2.5 Summary of Literature Review

After reviewing available literature, there was evidence that the PWB of adolescents was affected by prevailing environments like economic status, engagement in physical activites. Adolescents' PWB was also reported to persist into adulthood requiring the present study which sought to find out how the COVID-19 preventive measures influenced PWB of adolescent candidates.

Further review of literature indicated that there were effects of preventive measures on university and college students and the general population. It was evident that there were gaps in research regarding influence of COVID-19 preventive measures on psychological well-being of secondary school candidates who experienced interruption in the school calendar which may have had a major effect on their future. Although these studies found psychological effects, they did not focus on the specific effect among candidates. More so, the studies were done during the COVID-19 active period while the current study focused on the influence of the preventive measures after the fact.

Majority of the studies measured the independent variables of school closures, social distancing and online learning independently while the present study focused on an integration of the variables and how they influenced the PWB of KCSE 2021 candidates.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section discusses research methods utilized in conducting the research study. Sub-sections include: research design, the study location, the population targeted, the sampling techniques nad sample size, and instruments for data collection. The section further highlights the pilot study, reliability and validity tests, and mode of data analysis that were utilized in the study.

3.2 Research Design

Creswell (2003) defined a research design as a strategy for achieving research goals. This study employed cross-sectional and ex post facto research. Using this strategy, investigations begin after the fact has taken place with no interference from the researcher (Salkind, 2010). KCSE 2021 candidates experienced the COVID-19 preventive measures and possible psychological well-being effects between March 2020 and January 2021. The study was done after the fact thus making ex post facto research design appropriate.

The study described the study variables regarding the relationship and did not seek to understand why the relationship existed. Cross-sectional descriptive survey design enabled the researcher to describe the prevailing circumstances of phenomena the KCSE 2021 experience of COVID-19 preventive measures and their psychological well-being by taking primary data and tabulating it in a format that could be used to arrive at conclusions.

3.3 Study Variables

The study variables comprised measures to stop the spread of COVID-19 and psychological well-being. The independent variable COVID-19 preventive measures had three sub-variables each with specific indicators: 1) school closures –access to learning materials, teachers, study groups, understanding concepts when learning alone, learning time, and balanced study subject-wise.; 2) social distancing – disconnection from friends, loss of social leisure activities, disconnection from relatives, reduced social support; 3) online learning – awareness, desire/motivation, affording internet, availability of learning devices, perceived effectiveness. The dependent variable was psychological well-being. Its main indicators were: autonomy, environmental mastery, personal growth, positive relations with others and purpose in life. Intervening variables of age, gender and family support may have influenced the severity of impact of the dependent variables on psychological well-being.

3.4 Location of the Study

Mombasa County in Kenya was the location for this study. Being one of largest cosmopolitan and metropolitan cities in Kenya, residents come from different ethnic, cultural, and racial backgrounds. It was therefore expected that the student candidates' population varied considerably in terms of social, economic, and cultural demographics making the sample representative of KCSE 2021 candidates in Kenyan secondary schools. Mombasa County also reported the second highest cases of COVID-19 infections in the country, with 15,452 cases as of September 2021 (Faria, 2021). Mombasa County also has an international airport and is a port of entry placing its inhabitants at an increased exposure rate to the coronavirus. It was also a tourism

destination, a major economic activity in the county that was greatly impacted by the COVID-19 preventive measures further affecting livelihoods.

3.5 Target Population

Murphy (2016) defines population as the total number of persons or items being investigated in any field of research who have similar characteristics. The population for this study contained all the KCSE 2021 candidates in secondary schools in Mombasa County Kenya. This population was perceived to have encountered the weight of the government's strategies to curb the spread of COVID-19 during their senior years in secondary school education as they prepared to sit their national examination. Adolescents, especially late adolescents, are reported to have suffered mental health disorders over the shutdown period following reported cases of COVID-19 and there were increased cases of suicide among this group (UNICEF, 2021). Moreover, the choice for secondary school candidates was based on the fact that all of them are adolescents who are easily affected by any change in lifestyle especially changes to their education, an important pathway in their transition to adulthood. According to 2021 KCSE Examination Essential Statistics, 10,062 students were candidates for the year 2021. The KCSE 2021 candidates were affected by the school closures, social distancing and online learning; the school calendar was revised and their exam year got pushed ahead to March 2022.

Table 3.1

Target Population

Target group	Number of candidates
Public schools	6085
Private schools	3977
Total	10062

Source: 2021 KCSE Examination Essential Statistics

3.6 Sampling Technique and Sample Size

Kabir (2016) describes sampling to be the procedure through which a sample is selected to estimate population characteristics. For this study, participant learning institutions were selected via stratified and simple random sampling while candidates were purposively sampled. Secondary schools in Mombasa County were stratified in terms of public and private secondary schools as in 2021 KCSE registered examination centers by county and category of school. According to the 2021 KCSE statistics from the Mombasa County Education Office, 6085 and 3977 candidates sat the 2021 KCSE in public and private centers respectively. There were 45 public schools and 76 private schools in Mombasa County; special schools were excluded as the candidates may have had underlying conditions that predisposed them to low levels of PWB.

Table 3.2

Schools Sample Size

Target	Number of schools	Total candidates population	Percentage of total population (%)	School sample size (Ratio)
Public schools	45	6085	60	6
Private schools	76	3977	40	4
Total	121	10,062	100	10

Source: Mombasa County Education office

The school sample size was calculated according to the ratio of public schools to private schools with consideration given to the number of students in each category. Thus the sample was 6:4, and a total of 10 schools formed the sample as displayed in Table 3.2. Then, simple random sampling was applied to single out government and privately-owned schools taking part in this research and individual KCSE 2021 candidates from each school who were the respondents. Proportionate stratified random sampling was utilized to determine the sample sizes in public and private schools. Proportionate stratified random sampling ensured that number sampled from each segment was proportional to the population size in the strata (Taherdoost, 2016).

Fisher's formula was utilized to get the candidates' sample size as:

$$\frac{z^2 p(1-p)}{d^2}$$

Where;

n= represents the sample size

z= statistic for confidence level, (95% level of confidence =1.96)

d= precision (d is 0.05 for CI at 95%)

p= expected prevalence, if the value of p is unknown an assumption of p=0.5 is made (Israel, 2009)

Therefore, the sample size is arrived at as:

$$n = \frac{(1.96^2)(0.5)(1-0.5)}{(0.05)^2}$$

$$n = 384$$

Therefore, this study had a sample size 384 KCSE 2021 candidates from Mombasa County, Kenya.

Table 3. 3

Candidates' Sample Size

Target population	**Number in population**	**Sample size**
Boys	5422	(5422*384)/10062 207
Girls	4640	(4640*384)/10062 177
Total	10,062	384

Source: Mombasa County Education office

3.7 Data Collection Instruments

A questionnaire was utilized to obtain raw data. Young (2016) argue that a questionnaire is a set of particular, normally short questions that can be replied to

independently by a respondent. A questionnaire generated by the researcher with adaptations from Ryff's measures of PWB for teenagers. There were five sections to the questionnaire. The initial section entailed items collecting demographic data about the respondent. Section two constituted statements regarding schools closure. Section three on social distancing and section four was on online learning. The last section consisted of questions on psychological well-being. The questionnaire was structured into a 5-point Likert scale.

The questionnaire was useful and suitable since it helped in asking many questions and also gave the respondents time to respond. They also permitted anonymity, so participants received assurances of secrecy. The questionnaire enabled the researcher to reach respondents who resided all over the country. The questionnaires were also useful in keeping up with the COVID-19 preventive measures as no close contact was needed.

An interview schedule was used on the guidance and counseling teachers who were key informants in this study. The interview schedule included questions on the teacher's perception of the KCSE 2021 candidates' psychological well-being as an influence of the COVID-19 preventive measures and any psychosocial support provided during the return to school period and before sitting the national examination.

3.8 Data Collection Methods

The researcher recruited research assistants in every school who helped in the identification of respondent students and getting their contact details. The research assistants who were teachers and contact respondent students were trained on data collection. The researcher then distributed the introduction letters through the research

assistants who first ensured that the respondents accepted to take part in the study. Distribution of the online questionnaires was done by the researcher assisted by research assistants. Google forms questionnaires were sent via email and whataspp to the respondents and emailed back to the researcher once filled. The researcher also conducted physical and over-the-phone interviews with teachers who were key informants. The teachers were those who were in the guidance counseling department, for each of the schools sampled, during the period before and following the closing of schools during active COVID-19 period in the country. The teachers were given an explanation of the objectives of the research and they then gave consent to participate by signing the consent forms. The researcher then proceeded to interview them.

3.9 Pilot Study

A pilot study was undertaken as a preliminary examination of the proposed study to test whether the research instruments would accurately meet the study's objectives and that there were minimum errors. The pilot study was performed on 10 percent of the research sample. Respondents in a pilot study should range between 1 and 10 percent of the study sample (Mugenda, 2003). Therefore, 35 participants were obtained from a school in Nairobi County through random sampling. The questionnaire were sent to the respondents and the responses were coded and put into SSPS to produce the reliability coefficients. Nairobi County were chosen since it has similar demographic features to Mombasa County. The respondents included KCSE 2021 candidates from a secondary school from Nairobi County which were not be part of the final sample. Through findings from the pilot study, the researcher was able to improve the research instruments' validity and reliability.

3.9.1 Validity of Research Instrument

The amount to which an instrument determines that which claims to measure is referred to as validity (Mohajan, 2017). This study used both content and construct validity. To test the validity of the questionnaire, experts in the area of psychology assessed the questionnaire. The researcher then incorporated the suggestions from the psychology experts by reviewing some redundant items and rephrasing some items for clarity.

3.9.2 Reliability of Research Instruments

An instrument's ability to give accordant findings every time it is used is referred to as reliability (Taherdoost, 2016). The dependability instrument is used to see if the research instrument produces consistent results every time it is utilized. Cronbach's alpha was utilized to gauge the questionnaires reliability. Results from the pilot study were subjected to a reliability test and changes to improve the reliability of the research tools effected. The tool was accepted once its Cronbach's alpha reliability is greater than 0.7 percent (Mohajan, 2017).

The five-point Likert scale's internal consistency of the variables was assessed utilising the results of reliability tests. The reliability coefficients for each and every Likert scaled item were calculated, and the results are displayed in Table 4.2.

Table 3.4

Reliability Assessment

Variable	Cronbach's Alpha	Number of items	Comment
Schools' closure	0.878	8	Reliable
Social distancing	0.709	4	Reliable
Online learning	0.780	5	Reliable
Physhological well being	0.854	8	Reliable

According to Table 4.2's results, all of the scaled elements were over the value of 0.7. Therefore, all of the variables met the reliability criteria of 0.7 or higher and were deemed sufficient for this investigation. This level of construct measure reliability was well above threshold (Bryman, 2012; Cooper & Schindler, 2011).

3.10 Data Analysis Techniques

Questionnaires, once returned, were put through a review to check comprehensiveness and uniformity then they were analyzed. To begin, the study conducted diagnostic tests, which were used to evaluate the regression analysis assumptions before data analysis. Multicollinearity, heteroscedasticity, and linearity were tested as part of the diagnostic process. SPSS version 23 program was used to analyse data collected. Descriptive statistics like percentages, frequencies, mean, and standard deviation were used. The descriptive statistics helped summarize the data for easier interpretation.

Multiple linear regression analysis was used for inferential statistics. To determine the correlation of the independent factors (school closures, social distancing, and online learning) and the dependent variable (psychological well-being), regression analysis was used. A multiple linear regression analysis provided statistics for regression

coefficients and p values. The statistics was used to test the statistical importance of the variables' relationship. A p-value of or less than 0.05 shows a significant connection.

3.11 Logistical and Ethical Considerations

With an authorization letter from Kenyatta University, the researcher proceeded to the field. After presenting the proposal to Kenyatta University's graduate school, a letter of approval was received. Then the researcher applied to national council for science nad technology (NACOSTI) for licence to collect data. The researcher then sought authorization from the Mombasa County's Director of Education and thereafter permission from respective school principals. The researcher then collected contact details of the participants and communicated to them the study's methodologies and objectives of the study for them to make an informed choice to participate or not. The researcher then sent the consent form via email and allowed the participants to give their informed consent. Further, the researcher informed the participants that all information received would be handled with confidentiality; neither would the participants be compelled to submit any personal identifiable information like names.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

4.1 Introduction

The chapter constitutes data presentation, analysis and discussions. It comprises six sections. The first and second section offers the questionnaire response rate and reliability analysis. The third section gives the respondents' demographic information. The fourth section contains findings on the influences of school closure; social distancing and online learning and students' psychological well-being. This section includes regression analysis for the association between the independent and dependent variables. The results were presented in figures, tables and in prose forms. Themes reflecting the objecties of the study were used to organize the analyzed data.

4.2 Questionnaire Response Rate

Questionnaires were sent via google forms to the KCSE 2021 candidates from Mombasa County, A total of 348 were sent. The total forms submitted and not submitted and the response rate are shown in Table 4.1.

Table 4.1

Questionnaire Response Rate

Response	Frequency	Percentage
Submitted	270	70.31%
Not submitted	114	29.69%
Total	**384**	**100%**

Source: Research Data (2022)

The total questionnaires that were duly filled and submitted were 270 (70.3%). The overall response rate was more than 60% hence adequate (Babbie, 2004).

4.3 Demographic Information

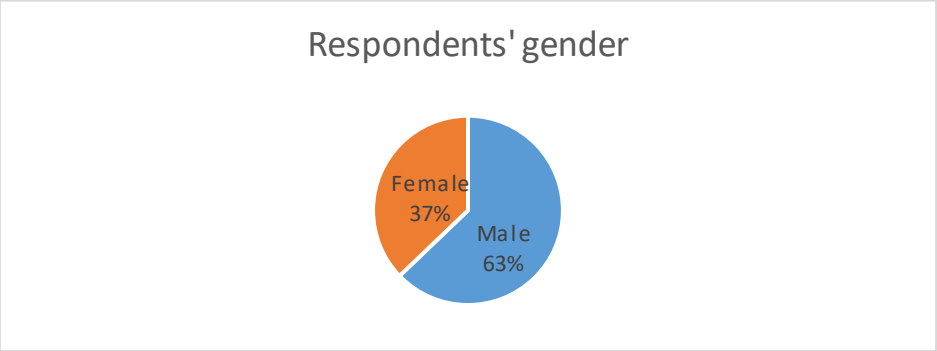
In this section the respondents' bio data is presented. Demographics presented included: gender of the respondents; number of members in the family; parent's income; level of emotional and physical support received from parents.

4.3.1 Respondents' Gender

The survey participants were requested to specify their gender as either male or female. Figure 4.1 displays the results.

Figure 4.1

Respondents' Gender



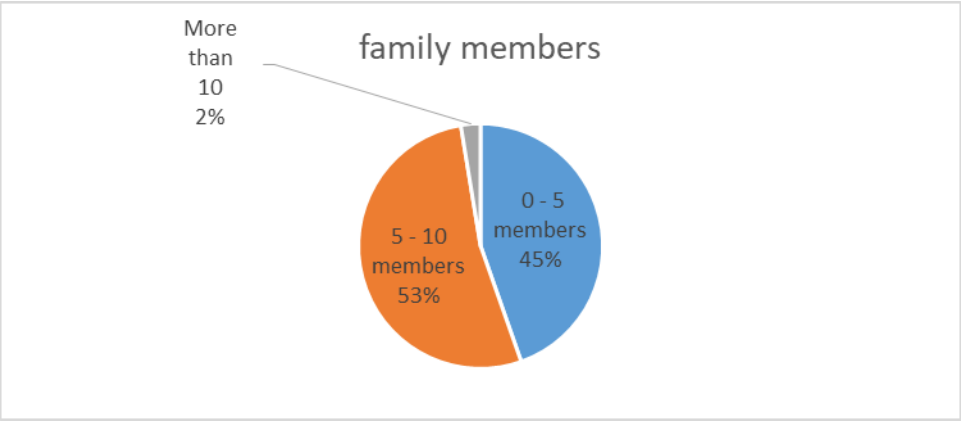
The results showed that there were more male respondents (63%) compared to female respondents (37%). More boys than girls sat the KCSE 2021 from Mombasa County hence the representation of the genders indicated a reliable and valid sample.

4.3.2 Number of Family Members

The respondents were requested to state how many family members they were in their households ranging from 0 to more than 10 members. Figure 4.2 exhibits the results.

Figure 4.2

Number of Family Members



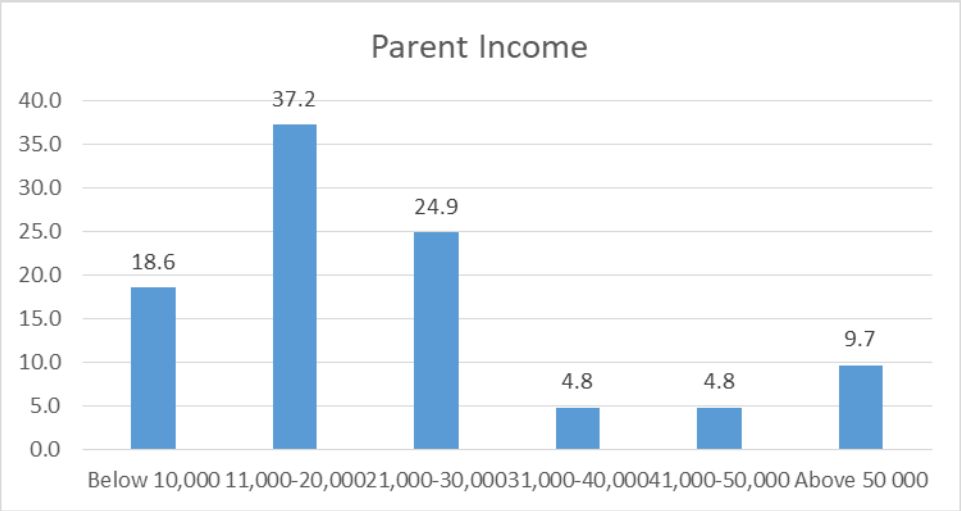
From the results, majority of the respondents (53%) came from a family of 5 – 10 members; while the minority 2% came from a large family of more than 10 members. This indicated that the students respondents came from fairly large families.

4.3.3 Parents' Income

Respondents were required to give the range of their parents' income; descriptive analysis was utilized to analyse the data collected and results were presented using percentages as shown in Figure 4.3.

Figure 4.3

Parents' Income



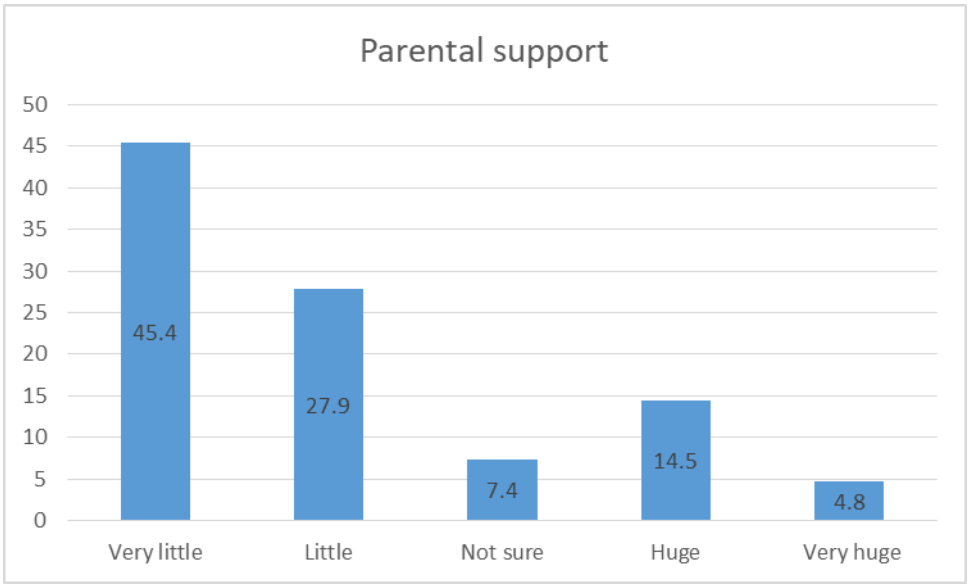
The results implied that 37.2%, a relatively significant number of the KCSE 2021 candidates from Mombasa County came from low income families. The minority 4.8% reported that their parents earned between 41,000 and 50,000 kenya shillings. This implied in a study by MoE (2020) which reported that the kenya government through school feeding programmes supported over 1.6 million. This further implied an inability of households to provide adequate basic needs for the children.

4.3.4 Level of Emotional and Physical Support received from Parents

The survey participants were required to rate the level of emotional and physical support they received from their parents within a range of very little, little,unsure, huge and very huge. Figure 4.4 shows the results.

Figure 4.4

Level of Emotional and Physical Support received from Parents



A majority of the respondents (45.4%) reported that they received very little emotional and physical support from their parents; while a monirity (4.8%) indicated they received vrery huge parental emotional and physical support. The absence of family social support may have predisposed respondents to poor or low psychological well-being during the COVID-19 pandemic. These results were consistent with studies done on social distancing which indicated a decrease in physical contact with relatives over the COVID-19 pandemic and its attendant social distancing controls (Villani Pastorino, Molinari, Anelli, Ricciardi, Graffigna,., & Boccia 2021).

4.4 Findings of the Study

The study findings were presented as per the set objectives: influence of the independent variables – school closure, online learning and social distancing- on the dependent variable psychological well-being presented in each section.

4.4.1 Psychological Well-Being among KCSE 2021 candidates

The questionnaire items required respondents to report their degree of psychological well-being using a 5-point Likert scale of: strongly agree; agree; neutral; disagree; strongly disagree. The items were further categorized in five levels: very unhealthy, unhealthy, slightly unhealthy, healthy and very healthy. In scoring the items 2, 3, 4, 5, 6, 7, and 8 were given the values: 5- strongly agree, 4- agree, 3- neutral; 2-disagree; 1-strongly disagree. Item 1 was scored: 5-strongly disagree; 4-disagree; 3-neutral; 2-agree; 1-strongly agree. Table 4.2 presents the results.

Table 4.2

Students' Reports on Psychological Well-being

Report on psychological well-being	Frequency in percentage
Very unhealthy (31-40)	42.5
Unhealthy (26-30)	29.5
Slightly unhealthy (17-25)	16.6
Healthy (9-16)	5.24
Very healthy (1-8)	6.16

Findings indicated while majority respondents (42.5%) had unhealthy PWB, the lowest (5.24%) of the respondents had healthy PWB. These findings implied a significant association of the COVID-19 preventive measures to the overall psychological well-being of the respondents. It corresponded with studies done by Hassan and Bao (2020), and Popescu, Tătucu, and Dobromirescu (2020) on college students which revealed increased mental stress over the COVID-19 curfew.

The guidance and counseling teachers were interviewed on whether there was any effort by the school to check on the candidates' well-being over the school closure period. Most indicated little or no support towards students' well-being during the COVID-19 active period. In schools where there had been an attempt to check on the students, there were reported feelings of fear among students that the school closure would negatively affect their overall preparedness for the national examination and their expected outcomes.

The guidance and counselling teachers were interviewed on their impression of the overall well-being of the candidates after the return to school in January 2021. The teacher respondents indicted that most students had been affected pyschologically especially due to isolation and home stress. There were a few reports of drop-out rates due to teenange pregnancies, early marriages and some boys having gone into 'bodaboda' business.

Findings from guidance and counselling teachers indicated little or no psychosocial support to the KCSE 2021 candidates' psychological well-being during the school closures as well as on return to school as students prepared to sit their final examinations in secondary schools.

4.4.2 Influence of School Closure on Psychological Well-being

The respondents reported the level of influence of details of school closure on a 5-point Likert scale of: strongly agree; agree; neutral; disagree; strongly disagree. In scoring the items, levels of access to services offered in school were categorized in 5 categories of: very low; below average, moderate; above average; very high. Items were given the scores: 1- strongly agree, 2- agree, 3- neutral; 4-disagree; 5-strongly

disagree. Table 4.3 exhibits the findings for levels of access to services offered in school.

Table 4.3

Students' Experiences of School Closure

Level of access to services offered in school	Frequency in percentage
Very low (9-16)	26.6
Below average (17-24)	36.5
moderate (25-32)	19.4
Above average (33-40)	7.1
Very high (41-48)	6.8

The findings showed that on average, majority (36.6%) of the respondents had below average access to services offered in school, followed by 26.6% respondents who had very low access. These findings indicated a negative impact of the schools closure to the candidates learning process. These findings were congruent with Barasa et al (2020) and Nyaga (2020) studies among Kenyan youth which also reported increased cases of gender-based violence among adolescents as an impact of the extended lockdown and curfew in the country.

The findings from interviews held with guidance and counseling teachers on the academic support the school provided students during the school closure revealed that in the sampled schools, teachers sent notes as well as held online classes.The teacher respondents however indicated that the online teacher support was not successful since most students did not have the means to access the online classes. This meant that only a minority number could attend the online classes which affected learning over the school closure period.

The study findings on the influence of school closure and the candidates' perceived preparedness for the national examination indicated a negative impact on their academic work. As such, school closure caused unpreparedness for the examination amongst the KCSE 2021 candidates.

4.4.2.1 Regression Analysis of School Closure

Regression analysis was done to establish the link between school closure on the psychological well-being among 2021 KCSE candidates. The results are exhibited in Table 4.4

Table 4.4

Regression Analysis for School Closure

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	Beta		
(Constant)	-0.001	0.143		-0.008	0.994
School closure	-0.267	0.039	-0.260	-6.877	0.000

Regression of coefficients illustrated that school closure had a negative and significant effect with psychological well-being among KCSE 2021 candidates (β=-0.267, p=0.000, t= -6.877). These results suggested that an increase in school closure by one unit would decline psychological well-being among KCSE 2021 candidates by 0.267 units. The study findings were congruent with Ishimoto Yamane, Matsumoto, and Kobayashi, (2020) who found that shutting down of schools had a significant effect children's psychological well-being.

4.4.3 Influence of Social Distancing on Psychological Well-Being

The respondents were requested to indicate levels of interaction with friends and relatives, engagement in exercises and social support which reflected their experience of social distancing on a Likert scale of five items. The items were scored as 5 – strongly agree; 4 – agree; 3; neutral; 2; disagree; 1- strongly disagree. The experience of social distancimg was categorized into five levels: extremely negative; very negative; moderat;, mild negative effect; no effect. The findings were exhibited in Table 4.5

Table 4.5

Students' Experience of Social distancing

Experience of social distancing	Frequency in percentage(%)
Extremely negative (21-25)	30.2
Very negative (17-20)	34.6
Moderate (13-16)	20.5
Mild negative effect (9-12)	10.5
No effect (5-8)	5.1

From the findings, majority of the respondents (34.6%) reported very negative exprience of social distancing; followed by 30.2% respondents who had an extremely negative experience. The results indicated that social distancing affected the repondents socialization needs due to the disconnection from friends and relatives; lack of engagement in play activities; and lack of social support..

Further probing from the guidance and counselling teachers on the students reported feelings about social/physical restrictions, indicated that most students felt lonely and could not engage in any social activity with their friends and relatives. These findings

were consistent with studies that showed major mental health and physical effect of the coronavirus pandemic social separation and physical exercise routines smong Italians (Di Corrado, Magnano, Muzii, Coco, Guarnera, De Lucia, & Maldonato, 2020).

4.4.3.1 Regression Analysis of Social Distancing

Regression analysis was conducted to establish whether a relationship existed between social distancing and the psychological well-being among 2021 KCSE candidates. Table 4.6 shows the results.

Table 4.6

Regression Analysis for Social Distancing

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.001	0.143		-0.008	0.994
Social distancing	-0.310	0.052	-0.294	-5.944	0.000

Regression analysis revealed a negative and significant effect of social distancing on psychological well-being among KCSE 2021 candidates (β= -0.294, p=0.000, t= -5.944). This implied that a decline in social distancing by one unit would improve psychological well-being among KCSE 2021 candidates by 0.294 units. The study findings were consistent with Villani et al (2021) where increased levels of anxiety were associated to separation from friends and lack of social support among Italian undergraduate students.

4.4.4 Influence of Online Learning on Psychological Well-Being

Items on the questionnaire required respondents to indicate their experience of online learning, on a 5-point Likert scale. The items 1, 2, 4 were scored as 1 – strongly agree; 2 – agree; 3; neutral; 4; disagree; 5- strongly disagree. Items 3 qand 5 were scored as 5- strongly agree, 4, agree; 3- neutral; 2- disagree; 1-strongly disagree. The experience of social distancimg was categorized as: very negative; mildly negative; moderate; mild positive; and very positive. Table 4.7 exhibits the findings.

Table 4.7

Students' Experience of Online Learning

Experience of oline learning	Frequency in percentage(%)
Very negative (21-25)	58.7
Mildly negative (16-20)	22.7
Moderate (11-15)	8.4
Mild positive (6-10)	2.8
Very positive (1-5)	7.4

The study findings revealed that majority 58.7% of the respondents had a very negative experience of online learning; while only 7.4% of the respondents reported a very positive online learning experience. These findings showed the ineffectiveness of online learning for learners over the COVID-19 pandemic.

Through interviews, however, guidance and counselling teachers reported that efforts to conduct online lessons over the school closure period were unsuccessful as majority of their students could not access internet or mobile phone devices. These results corresponded to Dolores (2020) findings that 78% households in Kenya had no

internet access which made online learning a challenge to learners during the COVID-19 imposed school closure.

4.4.4.1 Regression Analysis of Online Learning

Regression analysis was conducted to establish the link between online learning on the psychological well-being among 2021 KCSE candidates Table 4.8 presents the results.

Table 4.8

Regression Analysis for Online Learning

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**		
(Constant)	-0.001	0.143		-0.008	0.994
Online learning	-0.419	0.043	-0.446	-9.645	0.000

Regression of coefficients demonstrated that online learning had a negative and significant effect with psychological well-being among KCSE 2021 candidates (β=0.419, p=0.000, t= -9.645). This implied that decline in online learning by one unit would improve psychological well-being among KCSE 2021 candidates by 0.419 units. The PWB of the candidates was made unhealthy by the lack of or failure to access learning over the COVID-19 period. The results support Popescu, Tătucu, and Dobromirescu, (2021) reported that students were dissatisfied with the lower quality of interactions in the virtual environment compared to the physical one, according to the findings.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study's objective was to investigate the influence of COVID-19 preventive measures on psychological well-being among the Kenya Certificate of Secondary Education 2021 candidates in Mombasa County, Kenya. This section provides a summary of the findings of the research. It furthermore provides the conclusions and recommendations.

5.2 Summary of Findings

This section contains the summary of the study findings. This was done as per objectives of the study.

5.2.1 Levels of Psychological Well-being

The first objective was to assess the levels of psychological well-being of KCSE 2021 candidates in Mombasa county, Kenya. Analysis of results showed unhealthy PWB among the KCSE 2021 candidats at 42.5% levels as influenced by the COVID-19 preventive measures.

5.2.2 Schools' Closure and Psychological Well-Being

The second objective of the study was to determine the influence of schools' closure on psychological well-being among Kenya Certificate of Secondary Education 2021 candidates in Mombasa County, Kenya. During COVID-19, KCSE 2021 candidtates in Mombasa, Kenya experienced below average access to educational services at 36.5% and at very low levels of access at 26.6%. Regression analysis of school

closure and psychological well-being found a significant negative correlation (β = -0.267, p = 0.000 at p > 0.05).

5.2.3 Social Distancing and Psychological Well-Being

The third objective of the study was to determine the influence of social distancing on psychological well-being among Kenya Certificate of Secondary Education 2021 candidates in Mombasa County, Kenya. During the COVID-19 pandemic, KCSE 2021 candidates in Mombasa county had very negative (34.6%) and extremely negative (30.2%) experience of social distancing. Regression results showed that social distancing had a negative and significant effect with psychological well-being of KCSE 2021 candidates (β= -0.294, p=0.000, at p > 0.05).

5.2.3 Online Learning and Psychological Well-Being

The fourth objective of the study was to determine the influence of online learning on psychological well-being among Kenya Certificate of Secondary Education 2021 candidates in Mombasa County, Kenya. The KCSE 2021 candidates experience of online learning was very negative at 58.7%.

Regression results showed that online learning had a negative and significant effect with psychological well-being (β=0.419, p=0.000, at p > 0.05)..

5.3 Conclusions of the Study

The study concluded that the psychological well-being of KCSE 2021 candidates was poor over COVID-19 period where there were preventive measures of school closure, social distancing and online learning. These preventive measures contributed to the decline in PWB of the candidates.

The study concluded that school closure had a negative and significant effect on psychological well-being of KCSE 2021 candidates in Mombasa county, Kenya. In

addition, school closure made it impossible for majority of the candidates to access learning resources and services that could be found in school.

The study concluded that social distancing had a negative and significant effect with psychological well-being of KCSE 2021 candidates. The study further concluded that the experience of social distancing of secondary school students was very negative. This, therefore, affected their psychological well-being.

The study concluded that online learning had a negative and significant effect with psychological well-being of KCSE 2021 candidates. Further, the candidates had very negative experience of online learnig as majority could not access internet therefore found online learning ineffective.

5.4 Recommendations of the Study

The study recommends timely and routinely assessment of the secondary schools students for their psychological well-being needs and as a way of monitoring. All round intervention measures may also be hepful to the secondary school students. This therefore calls for combined efforts by Ministry of Education, mental health experts, and other health practitioners to put in place management strategies.

Preventive measures are necessary to cushion the students from the negative effects of a pandemic. Of importance too is the formulation of appropriate policies to support secondary school students especially from adverse effects of the pandemic

Recommendations to parents to be cautious of their children’s predisposition to stressful environments especially while they were at home especially during periods of national disasters or outbreaks of diseases like the coronavirus. This was because family stress affects students psychological reactions and also causes fear.

It was recommended that teachers make routinely follow ups or monitoring of students' well-being in the event of a national disaster or pandemic like the COVID-19 which may lead to schools closure. The Ministry of Education should also devise vibrant and nationwide measures to provide psychosocial support to students in any event of a national disaster or pandemic.

5.5 Recommendations for Further Research

This study investigated the influence of COVID-19 preventive measures on psychological well-being of mong KCSE 2021 candidates in Mombasa County, Kenya. The study recommended further research on the influence of COVID-19 preventive measures on psychological well-being of KCSE 2021 candidates in other counties like Kiambu county, or Nairobi County.

The study only used google forms sent via email to respondents; further research could include other methods line focus groups.

The study was limited to participants who had access to internet amd electronic devices to fill the online questionnaire. Further research could use physical administration of questionnaire given the lifting of the stringent COVID-19 preventive measeures of social distancing.

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Appendix I: Letter of Introduction to Key Respondents

Date: ----------

Dear Sir/Madam,

RE: OPTIONAL INVOLVEMENT IN THE RESEARCH

My name is Catherine Karimi a Masters student at Kenyatta University. I am researching the influence of COVID-19 preventive measures on psychological well-being of secondary school KCSE 2021 candidates in Mombasa county, Kenya. The feedback you give and your perspectives on the subject will be useful in compilation of my study. The information required is purely for the purpose of research and it will only take 15 minutes. The answers given by you are anonymous and no third party will be privy to the information. Sign at the bottom if you agree to participate in this study.

Thank you for participating in this research.

Yours Sincerely,

Catherine Karimi

Sign: ……

Appendix II: Questionnaire for Student Respondents

Please respond to the questions below truthfully and precisely. All the details provided will be handled with maximum confidentiality. For anonymity and privacy, your name is not needed so do not write it. Kindly provide your honest opinion.

PART ONE: DEMOGRAPHIC INFORMATION

1. Identify your gender?

    a. Male { }

    b. Female { }

2. How many members are in your family?

    a. 0 - 5 { } 5-10 { } More than 10 { }

3. What is your parents' income (Kshs)

    a) Below 10,000

    b) 11,000-20,000

    c) 21,000-30,000

    d) 31,000-40,000

    e) 41,000-50,000

    f) More than 50,000

4. How would you rate the level of emotional and physical support you receive from your parents?

    a) Very little

    b) Little

c) Not sure

d) Huge

e) Very huge

PART TWO: SCHOOLS CLOSURE

For each of the statements in the table below, faithfully with a tick mark the level that closely describes your experience of school closure, between March 2020 – Jan 2021 COVID-19 per, as a KCSE candidate. The options provided are: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree.

Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
1. I could not access learning materials while at home					
2. Regular meals were unavailable					
3. Access to my school study groups was limited					
4. I had difficulty understanding concepts while studying alone					
5. I lost a considerable amount of time in my studies					
6. I had no access to my teachers for consultation					
7. It was less safe being at home due to the lack of essential protection services as is in school					
8. I was unable to balance my subjects during this period					

PART THREE: SOCIAL DISTANCING

For each of the statements in the following table using a tick mark the level which closely reflects your experience of social distancing between March 2020 – Jan 2021

COVID-19 period as a KCSE candidate The options provided are: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree.

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
When social distancing measures were put in place I was disconnected from my friends					
Social distancing limited my engagement in activities like play, swimming, exercise					
Social distancing disconnected me from my relatives					
I lacked needed social support due to social distancing					

PART FOUR: ONLINE LEARNING

For each of the statements in the table below kindly mark the level that best describes your experience of online learning between March 2020 – Jan 2021 COVID-19 period as a KCSE candidate. The options given are: Not at all, Rarely, Often, Almost always, Always.

Statement	Not at all	Rarely	Often	Almost always	Always
1. I was aware of ongoing online learning					
2. I had the desire to join the online classes to boost my preparedness as a candidate					
3. My family could not afford internet charges					
4. I had access to online learning devices					
5. I did not find online learning effective					

PART FIVE: PSYCHOLOGICAL WELL-BEING

For each of the statements in the table below, mark using a tick the degree which closely explains your psychological state of March 2020 - January 2021 COVID-19 preventive measures as a KCSE candidate The options given are: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree.

Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
1. I liked most aspects of my personality					
2. I feared that my life was getting adversely affected					
3. I lacked faith in my judgements, especially when they did not agree with the general consensus					
4. I had little interest or enjoyment in doing things					
5. I lost hope of completing my secondary education.					
6. I had a hard time organizing my life in a satisfactory way.					
7. I felt lonely most of the time					
8. I did not have many people who wanted to listen when I needed to talk.					

Do some of the experiences in (PART FIVE) above persist up to date? Yes ……

No …….

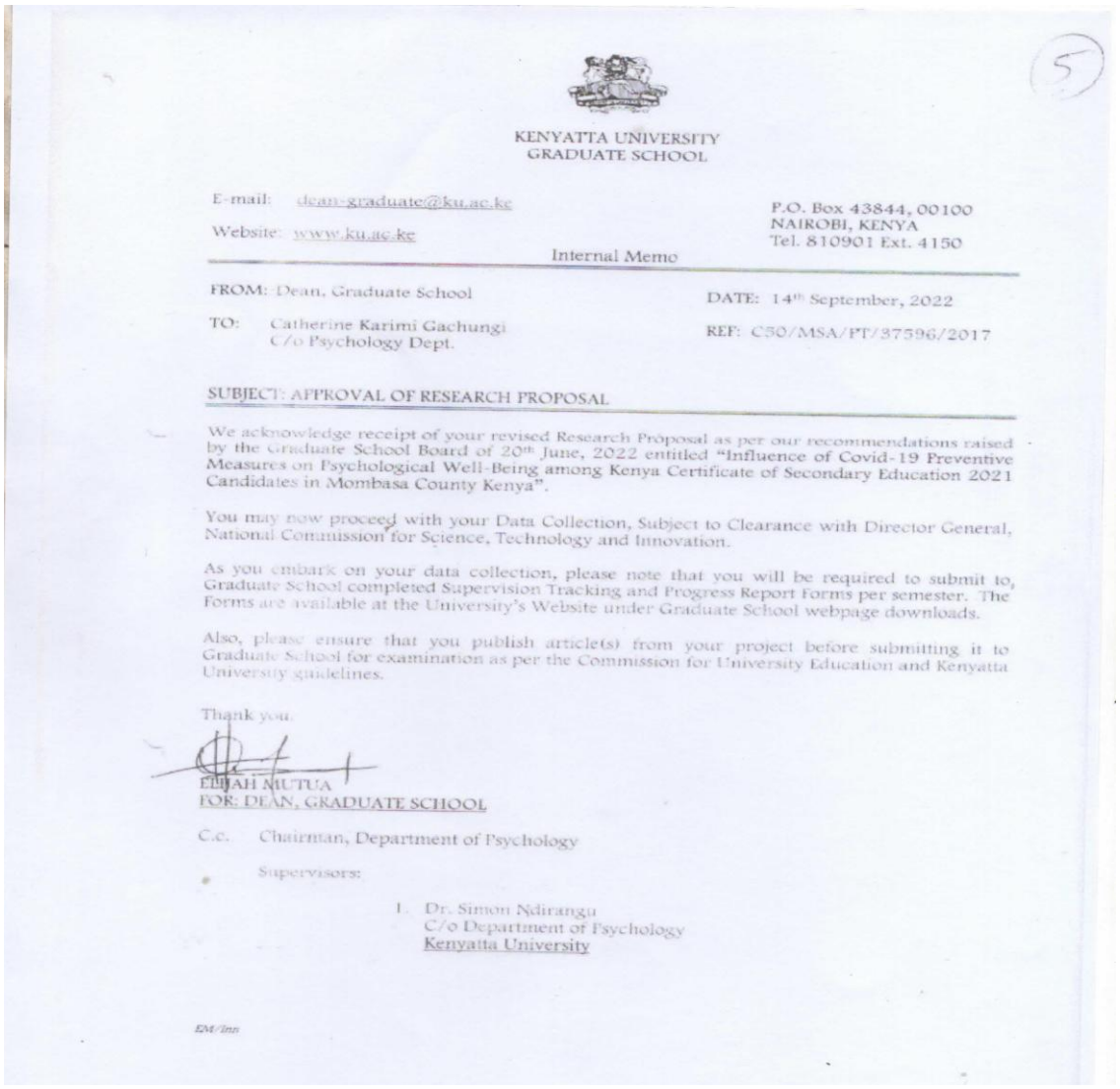
Please explain

……

Appendix III: Interview Schedule for Guidance and Counseling Teachers

1. During the school closure what academic support did the school provide candidates with?
2. What, in your opinion, was the success rate of this support?
3. Was there any effort by the school to check on the candidates' well-being over the school closure period?
4. (In the case where there was such an effort)
    i. What were the candidates' reported feelings about the social/physical restrictions?
    ii. What were the candidates' reported feelings about the implications of the school closure to their examination expected outcomes?
5. In your opinion, what were the influences of school closure and the candidates' perceived preparedness for the national examination?
6. After the return to school in January 2021, what was your impression of the overall well-being of the candidates?

Appendix IV: Kenyatta University Approval Letter



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

Internal Memo

FROM: Dean, Graduate School

DATE: 14th September, 2022

TO: Catherine Karimi Gachungi
C/o Psychology Dept.

REF: C50/MSA/PT/37596/2017

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge receipt of your revised Research Proposal as per our recommendations raised by the Graduate School Board of 20th June, 2022 entitled "Influence of Covid-19 Preventive Measures on Psychological Well-Being among Kenya Certificate of Secondary Education 2021 Candidates in Mombasa County Kenya".

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to, Graduate School completed Supervision Tracking and Progress Report Forms per semester. The Forms are available at the University's Website under Graduate School webpage downloads.

Also, please ensure that you publish article(s) from your project before submitting it to Graduate School for examination as per the Commission for University Education and Kenyatta University guidelines.

Thank you.

ELIJAH MUTUA
FOR: DEAN, GRADUATE SCHOOL

C.c. Chairman, Department of Psychology

Supervisors:

1. Dr. Simon Ndirangu
C/o Department of Psychology
Kenyatta University

EM/lnn

Appendix V: NACOSTI Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 442243

Date of Issue: 06/December/2022

RESEARCH LICENSE

This is to Certify that Ms.. Catherine Karimi Gachungi of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Mombasa on the topic: INFLUENCE OF COVID-19 PREVENTIVE MEASURES ON PSYCHOLOGICAL WELL-BEING AMONG KENYA CERTIFICATE OF SECONDARY EDUCATION 2021 CANDIDATES IN MOMBASA COUNTY KENYA for the period ending : 06/December/2023.

License No: **NACOSTI/P/22/22481**

442243

Applicant Identification Number

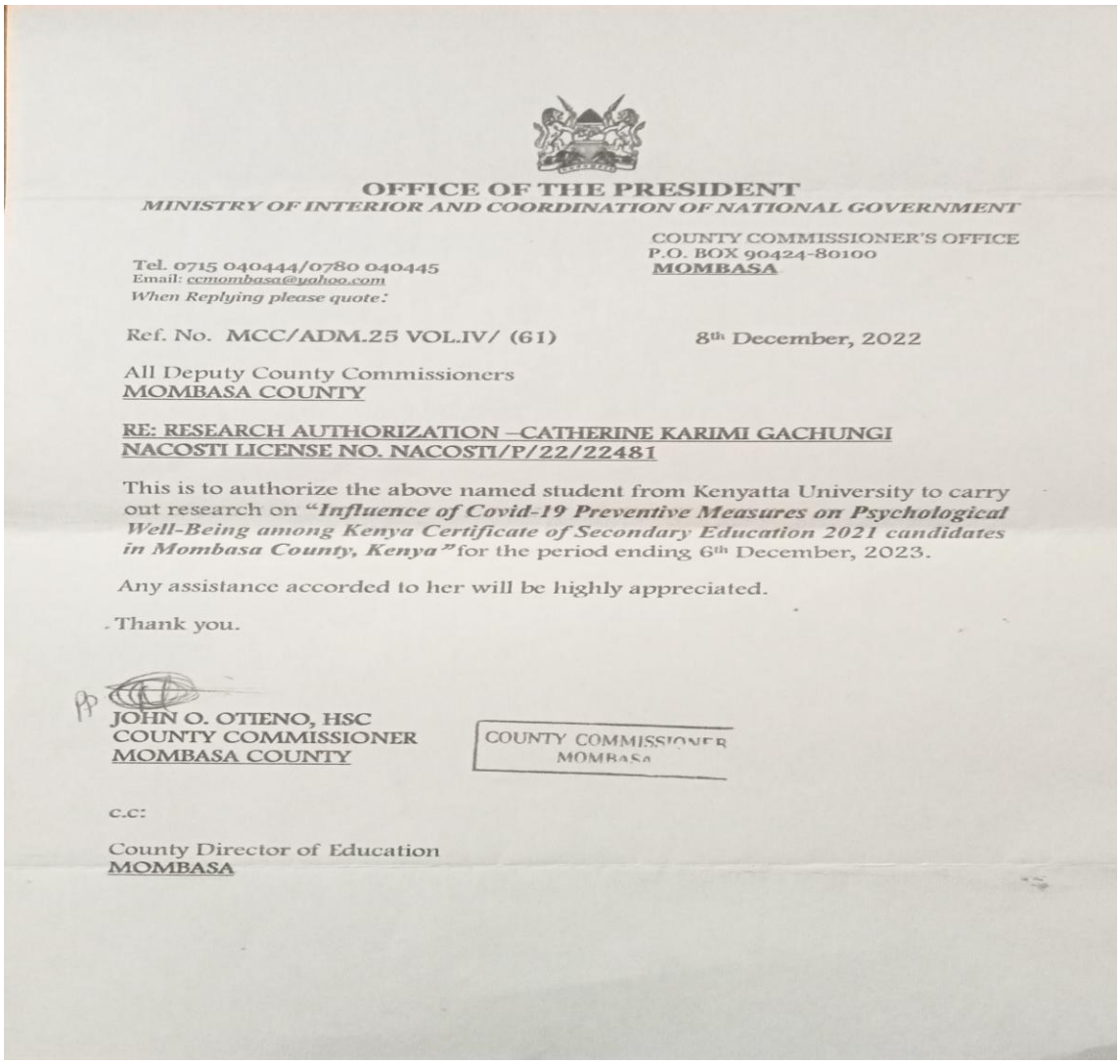
Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix VI: Research Permit Mombasa County Commissioner



OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

COUNTY COMMISSIONER'S OFFICE
P.O. BOX 90424-80100
MOMBASA

Tel. 0715 040444/0780 040445
Email: ccmombasa@yahoo.com
When Replying please quote:

Ref. No. MCC/ADM.25 VOL.IV/ (61) 8th December, 2022

All Deputy County Commissioners
MOMBASA COUNTY

RE: RESEARCH AUTHORIZATION –CATHERINE KARIMI GACHUNGI
NACOSTI LICENSE NO. NACOSTI/P/22/22481

This is to authorize the above named student from Kenyatta University to carry out research on "***Influence of Covid-19 Preventive Measures on Psychological Well-Being among Kenya Certificate of Secondary Education 2021 candidates in Mombasa County, Kenya***" for the period ending 6th December, 2023.

Any assistance accorded to her will be highly appreciated.

Thank you.

JOHN O. OTIENO, HSC
COUNTY COMMISSIONER
MOMBASA COUNTY

COUNTY COMMISSIONER
MOMBASA

c.c:

County Director of Education
MOMBASA