MOBILE PHONE DEPENDENCY AND PSYCHOLOGICAL WELLBEING OF STUDENTS IN SELECTED SECONDARY SCHOOLS IN NAIROBI COUNTY- KENYA

CYPRIEN NKOMA KAMENGWA

REG. N0. 1040043

A THESIS SUBMITTED TO THE FACULTY OF SOCIAL SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTER OF ARTS DEGREE IN COUNSELING PSYCHOLOGY AT THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

AUGUST, 2022

DECLARATION

I declare that this thesis is my original work and has never been submitted to any other university for academic credit. Information from other sources has been acknowledged

Signature ..... Date 18/08/2022

CYPRIEN NKOMA KAMENGWA

Reg. No 1040043

This thesis was prepared under the supervision, guidance and approval of the duly appointed supervisors by the University.

Signature..... Date..22/8/2022

Dr. ELIJAH MACHARIA NDUNGU

Signature..... Date....22/8/22

Dr. MARIA NTARANGWE

DEDICATION

I dedicate this wonderful piece of literature to you my dear sister Dadaas Kamengwa Katempa Ernilde. I know that you might not be able to understand the meaning of this dedication. Thank you for your love, and what you have done for me. May God bless you.

ACKNOWLEDGEMENT

I am grateful to the almighty God as the source of my life and blessings. I take this opportunity to cheer my sincere gratitude to my supervisors, Dr. Elijah Macharia and Dr. Maria Ntarangwe. You have been very helpful for a successful outcome of this thesis. I extend my gratitude to the Principals of schools which participated in the data collection process, thank you for your cooperation and collaboration. My gratitude also goes to Dr. Stephen Asatsa as the Head of the Counseling Psychology Department, many thanks to all my lecturers for your dedication to teaching and to encouraging students to always do more and better. May God bless you all.

I am also very grateful to Madame Agnes Kamengwa and to the Kamengwa Family for their support, their encouragement and for their prayers. My gratitude to you Madame Mary Ndea and your family, to father Lawrence Machovu, to Madame Jeanne Mupenda, and to Madame Marie Bulieni. Thank you to you, Sister Mary Kamara and to you my brother Michael Odhiambo. You have been a source of encouragement, icon of friendship, and blessing. Thank you for your material, moral, spiritual support that you offered me during this period of my studies. I say thank you to all my classmates for your friendship, assistance, care and collaboration, may the Almighty God bless you all.

ABSTRACT

The use of mobile phones is common among secondary school students. The mobile phone use and the psychological wellbeing of secondary school students have become an issue of interest for research. The aim of this study was to assess the relationship between the time spent on mobile phone and the psychological wellbeing of secondary school students in Nairobi County, Kenya. The objectives of the study consisted of determining the influence of duration in the mobile phone use on the psychological wellbeing of students in selected secondary schools; assessing the factors which contribute to mobile phone dependency among students in selected secondary schools; establishing mobile phone applications which interfere with the psychological wellbeing of students in selected secondary schools; and identifying strategies put in place for the management of mobile phone dependency in secondary school students of Nairobi county. The study used an embedded mixed method research approach. A Multistage sampling method was employed in selecting the 7 schools. The study population was 3324 and 7 School members of the administration. A total sample size of 364 respondents was drawn. Qualitative and quantitative data were collected using an interview guide and a questionnaire. Data were by thematic analysis, descriptive and inferential statistics. Pearson's Product Moment Correlation Coefficients was used for data analysis. The main findings of this study showed entertainment is the main reason for using the mobile phone; TikTok was found to be the most liked social media application by students in secondary schools in Nairobi county; the study assessed a strong negative correlation between time spent in the use of mobile phones and the psychological wellbeing of secondary school students (Mean=4.598 and Standard Deviation=0.953). The study also found that there was a strong negative correlation between time spent on the mobile phone and the aspect of autonomy (Mean-4.633 and Standard Deviation= 1.237), and the self-acceptance (Mean=4.911 and Standard Deviation=1.546). The study has formulated recommendation to the school administration to improve the school counselling facilities by allocating sufficient human and material resources in addressing the issues related to mental health of secondary school students.

TABLE OF CONTENTS

DECLARATION ..... **ii**
DEDICATION ..... **iii**
ACKNOWLEDGEMENT ..... **iv**
ABSTRACT ..... **v**
TABLE OF CONTENTS ..... **vi**
LIST OF TABLES/FIGURES ..... **x**
ABBREVIATIONS AND ACRONYMS ..... **xi**
OPERATIONAL DEFINITION OF KEY TERMS ..... **xii**

CHAPTER ONE **1**
INTRODUCTION **1**
1.1 Introduction 1
1.2 Background of the Study 1
1.3 Statement of the Problem 6
1.4 The Purpose of the Study 7
1.5 The Objectives of the Study 7
1.6 Research Questions 8
1.7 Hypothesis 8
1.8 Significance/ Justification of the Study 8
1.9 Theoretical Framework 9
1.10 Scope and Delimitation of the Study 9

CHAPTER TWO **11**
LITERATURE REVIEW **11**
2.1 Introduction 11
2.2 The Theoretical Framework 11
2.2.1 The Social Learning Theory 11
2.2.1.1 Principles of the Theory 11
2.2.1.2 The Application of the Theory 12
2.2.1.3 Strengths of the Theory 13
2.2.1.4 Limitation of the Theory 14

2.2.2 The Ecological Model 15
2.2.2.1 Principles of the Model 15
2.2.2.2 The Application of the Model 16
2.2.2.3 Strengths of the Theory 17
2.2.2.4 Limitations of the Theory 18
2.3 Literature Review 18
2.3.1 The Influence of Duration in Mobile Phone Use and the Psychological Wellbeing 19
2.3.2 Motivating Factors that Lead to Mobile Phone Dependency 25
2.3.3 Mobile Phone Applications and the Influence on the Psychological Wellbeing 30
2.3.4 Strategies Adopted for the Management of Mobile Phone Dependency 37
2.4 Research Gaps 41
2.5 Conceptual Framework 42
2.6 Conclusion 44

CHAPTER THREE 45
METHODOLOGY 45
3.1 Introduction 45
3.2 Research Design 45
3.3 Study Area 46
3.4 Study Population 46
3.5 Sampling Procedure and Sample Size 47
3.5.1 Research Sampling Matrix 50
3.6 Instruments for Data Collection 51
3.7 Pilot Testing of Research Instruments 52
3.8 Data Quality Control 53
3.8.1 Reliability and Validity of Instruments for Quantitative Data Tools 53
3.8.2 Trustworthiness and Credibility for Qualitative Data Tools 54
3.9 Data Collection Procedures 54
3.10 Analysis of Data and Presentation 55
3.11 Ethical Considerations 56
Conclusion 57

CHAPTER FOUR **58**
DATA ANALYSIS, PRESENTATION AND DISCUSSION OF FINDINGS **58**
4.1 Introduction 58
4.2 Response Rate 58
4.3 Demographic Characteristics of Respondents 59
4.3.1 Age Distribution of Respondents 59
4.3.2 Gender Distribution of Respondents 60
4.3.3 Cluster Distribution of Respondents 61
4.3.4 Family Status Distribution of Respondents 62
4.3.5 Religious Affiliation of Participants 63
4.3.6 Duration in Possession of a Mobile Phone 63
4.4 Findings of the Study 65
4.4.1 The Influence of Duration in Mobile Phone Use and the Psychological Wellbeing 65
4.4.2 Motivating Factors that Lead to Mobile Phone Dependency 68
4.4.3 Mobile Phone Applications and their Influence on the Psychological Wellbeing of secondary school students 74
4.4.4 Strategies in Place in the Management of Mobile Phone Dependency 78
4.4.5 Hypothesis Testing 80

CHAPTER FIVE **90**
SUMMARY, CONCLUSION AND RECOMMENDATIONS **90**
5.1 Summary of the Study 90
5.2 Summary of the Findings 90
5.2.1 Influence of Time Spent in the Use of Mobile Phone 90
5.2.2 Motivating Factors that Lead to Mobile Phone Dependency 91
5.2.3 Mobile Phone Applications and the Influence on the Psychological Wellbeing 91
5.2.4 Strategies in Place in the Management of Mobile Phone Dependency 91
5.2.5 Hypothesis Testing 92
5.3 Conclusion 93
5.4 Recommendations 94
5.5 Recommendation for Further Research 94

REFERENCES **95**

APPENDICES **105**

APPENDIX I: PERMISSION TO CONDUCT A RESEARCH IN THE SCHOOL 105

APPENDIX II: CONSENT TO PARTICIPATE IN RESEARCH 106

APPENDIX III: HEAD OF SCHOOL' CONSENT TO PARTICIPATE IN RESEARCH ... 107

APPENDIX IV: COUNTY EDUCATION' CONSENT TO PARTICIPATE IN RESEARCH 108

APPENDIX V: QUESTIONNAIRE FOR STUDENTS 109

APPENDIX VI: INTERVIEW GUIDE FOR HEAD OF SCHOOLS 114

APPENDIX VII: TIME PLAN 115

APPENDIX VIII : Research Authorization Letter from CUEA 116

APPENDIX IX: Research Permit NACOSTI 117

APPENDIX X: Authorization Letter from the Ministry of Education 119

APPENDIX XI: Authorization Letter From The County Commissioner 120

APPENDIX XII: AUTHORIZATION LETTER FROM NAIROBI CITY COUNTY 121

APPENDIX XIII: Plagiarism Report 122

APPENDIX XIV: MAP OF NAIROBI COUNTY 123

LIST OF TABLES/FIGURES

Table 1: Sampling Matrix 50
Table 2: Age of the Respondents 59
Table 3: Gender Distribution of the Respondents 60
Table 4: Gender Breakdown by Cluster 61
Table 5: Respondents by Cluster 61
Table 6: Family Status of Respondents 62
Table 7: Religious Affiliation 63
Table 8: Duration in the mobile phone ownership 64
Table 9: Time Spent in the Use of Mobile Phone 65
Table 10: Mean and Standard Deviation for the Time Spent 66
Table 11: Time Spent on the Mobile Phone and the Psychological Wellbeing 67
Table 12: I Use the Mobile Phone for Communication 68
Table 13: Use of Mobile for Entertainment 69
Table 14: Use of Mobile Phone for Studying 70
Table 15: Use of the Mobile Phone for Making Friends 71
Table 16: Use of the Mobile Phone for Other Needs 72
Table 17: Preference in the Use of Social Media 75
Table 18: Strategies in Managing the Mobile Phone Use among Secondary School Students. ... 78
Table 19: ANOVA Test for Motivating Factors for the Mobile Phone Use and the Psychological Wellbeing. 80
Table 20: Details for ANOVA Test on Groupings 81
Table 21: Result of the Pearson Correlation Between Time Spent and the Psychological Wellbeing 82
Table 22: Interpretation of the Psychological Wellbeing' Result 83
Table 23: Regression Analysis for Social Medial Applications and Wellbeing 86
Table 24: Results of Standardized Coefficients Beta 87

ABBREVIATIONS AND ACRONYMS

APA: American Psychological Association

GAD: General Anxiety Disorder

IBM: International Business Machines Corporation

MB: Mega Byte

NACOSTI: National Commission for Science and Technology and Innovation.

NAMI: National Alliance on Mental Illness

OECD: Organisation for Economic Co-operation and Development.

SLT: Social Learning Theory

SMS: Short Message Service

SMU: Social Media Use

SPSS: Statistical Package for Social Sciences

UNICEF: United Nations International Children's Emergency Fund.

US: United States

USA: United States of America

OPERATIONAL DEFINITION OF KEY TERMS

Mobile Phone: A mobile phone is any wireless device or gadget which facilitates communication between users by making calls and sending text messages, among other features. In this study the term mobile phone can be used interchangeably for a cellular phone or a cell phone.

Mobile Phone Dependency: A situation where an individual is so preoccupied by the availability and the use of the mobile phone at all the time. This preoccupation for the use of the smartphone absorbs the mind and the behaviour of the user in daily activities.

Nomophobia: It is the attitude consisting of developing and displaying reliance on the mobile phone use.

Psychological Wellbeing: is the state of the mind when an individual feels comfortable and makes one person adopt positive functioning that can be seen in a person's relatedness with others and the environment.

Secondary School: is a facility which offers education to people who have completed the primary level of education and before they join the university education. In this study secondary school is a period of education after the primary school and which comprises of four levels.

Secondary School Student: is as any individual attending class in the facility which is called secondary school and who is in one of the four levels.

Smart Phone: is any wireless devices or gadget which can connect to internet and provide a high number of services for the user such as making calls, and even video calls, sending text messages as well as pictures and video, accessing the social media platforms. In this study, mobile phone will take the meaning of a smartphone.

Social Media

Social media consist of any application which is providing interactive activities as well as accessing online materials through the internet.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The world is changing and development is occurring in almost all sectors of human life. This situation has been made possible through the development and introduction of new technologies. The world is marked by the improvement and invention of new technology. In today's world, the communication sector has seen tremendous advancement. The world has become a global village. These new technologies are bringing a cost to human life.

In this chapter, the researcher discussed the matter concerning the background of the study, the statement of the problem, the justification of the study, the study' objectives as well as the research questions. The chapter covered also the topics related to the hypotheses, the theoretical framework, the scope and the delimitation of the study.

1.2 Background of the Study

The world is now living in an era of smartness. In the sector of communication, the introduction of smartphones has changed the way people live and conduct themselves. Smartphones are described as devices with amplified features. The smartphones offer many services in terms of communication and social interactions like sending short messages, videos, emails among other services (Ogushi, Ajaegbu & Oluwaseyi, 2019).

The smartphone devices are making individuals capable of performing more tasks every day and in an easy manner such as booking for a travel ticket, accessing some remote databases among others. The mobile phone is offering more comfort to people in terms of communication. According to Laksmi (2016) a smartphone is a good tool considering the benefit it gives to the users in terms of access to easy ways of communication.

General, the mobile phone has become the best instruments for maintaining virtual interconnection between individuals. It was reported that there was an increasing number of individuals using the mobile phone in recent years. A report says that the world has enjoyed more connectivity today than ever before. There were 4.7 billion mobile subscribers globally at the end of 2015. Based on the global mobile phone ownership and subscription at the end of

2015 (Gadzani, Bitrus & Ngubdo, 2017). In the United States of America, among other countries from the North America, the percentage of people owning a mobile phone is very higher (Turner, 2021).

In USA, most people own a smartphone, including children and teenagers, who receive it at an early and critical age. Yavich and Davidovitch (2021) found that fifty-three percent of children aging from eight years to twelve years have a tablet computer and twenty-four percent own a smartphone. The mobile phone is attractive and seductive. This is due to the multiple functions the smartphone is offering to the user. They show some increasing interest in the use of the mobile phone. They even develop some special attachment to their device. There is a kind of dependency which is portrayed.

In USA, it was reported that the use and the dependency on mobile phone are responsible for affecting human by impacting negatively in some of the social and health matters as shown in this research finding. The smartphones use is associated with some health issues such as sleep among others (Yavich & Davidovitch, 2021).

According to Barany, et al. (2009) as cited by Anboucarassy and Begum (2014), a Swedish study among secondary school students found that the participants who felt the need to have their cell phones constantly accessible were more likely to report depressive mental health symptoms.

In Britain, this trend concerning mobile phone ownership was even seen on young people. It is observed nowadays that the number of teenagers accessing and using the mobile phones is on the increase too. With 68% of 5 to 15-year-olds using tablets in 2019 compared to 64 % in 2018, tablets remain the most popular device for browsing the internet. The 8 to 11-year-old age group, which increased from 66% to 72%, has been the main driver of this increase. Despite differences in socioeconomic class, gender, or ethnicity, ownership rates remain largely constant (Lakshmi, 2016).

In emerging economies such as India and Brazil, the situation concerning mobile phone ownership seems to be common among adult people. According to 2017 Gallup World Poll data, 93% of adults in high-income economies have their own mobile phones, while 79% have phones in developing economies. In India 69% of adults have mobile phones, 85% in Brazil and 93% in

China (Kunt, 2017). The aspect of dependency can be described as the increase reliance on the availability of a smartphone. In certain situations, this dependency has been associated with a problematic form of use: people were hypothesized to develop nomophobia. Nomophobia is an abbreviation for "no-mobile-phone-phobia" and is defined as the fear of being unable to use or being unreachable via one's mobile phone. Nomophobia is classified as a form of problematic smartphone usage behaviour and in recent years, interest in this phenomenon is growing. While other constructs of problematic usage behaviour focus on compulsive use or on negative social consequences of a high amount of phone use, nomophobia focuses on the dependence regarding the constant availability of resources provided through smartphones (Wolfers, Festl & Utz, 2020).

In South Korea, the same outcome was observed. It was also evident that the mobile phone dependency produces some negative effects on the self-esteem of its users. The findings of a study done on a group of Korean people is clear on this issue. The greater use of mobile phones has been found to be related with low levels of self-esteem, anxiety, depression as well as loneliness. In a study conducted by Jee Hyun on about 595 Korean students obtained a result which suggests that over usage of mobile phones might cause depression, increased interpersonal anxiety and decreased rate of self-esteem (Tabassum & Parveen, 2018). Many studies conducted in South Korea have revealed a close relationship between aggression and internet addiction. In terms of specific contents, online chatting, online pornography, online gaming and online gambling were all found to be associated with aggressive behaviour (Lee et al., 2018).

According to Huuter et al. (2006) as cited by Anboucarassy and Begum (2014) students using mobile phones were seemed to have different types of discomfort. Some of them are issues such as, sleep, depression, addiction, stress, fear of missing out, incivility and isolation among others.

In Italy, according to Rotondi, Stanca and Tomasuolo (2017), the mobile phone dependency is said to cause damages to social interactions. Whenever individuals are spending more time on the phone, the social interaction is negatively affected. As a consequence, despite the existence of several smartphone activities that involve interactions with others, overall the smartphone can be expected to play a negative moderating role on the relationship between face-to-face social interactions and subjective well-being. This hypothesis was tested empirically,

using a large and representative sample of Italian individuals between 2010 and 2014, focusing on time spent with friends as an indicator of social interactions. The findings indicated that time spent with friends is worth less, in terms of life satisfaction, for individuals who use the smartphone. In addition, we show that the positive association between time spent with friends and satisfaction with friends is significantly less strong for individuals who use the smartphone. Overly, the results are consistent with the hypothesis that the smartphone negatively affects the quality of face-to-face social interactions.

This is how the impact of smartphone use among pupils of Italian and Spanish descent is reported. On the problematic smartphone use among participants from two institutions, a comparison study was done. All of the items were statistically significant in practice, it was noticed, and they showed that students used their mobile devices more inappropriately than other users. The Spanish students showed more negative behaviour than their Italian peers, including phubbing, nomophobia, and a persistent need to check alerts. This is a propensity for people to use their mobile gadgets and ignore those around them (Roig, Espinosa & Solano, 2020).

In a study done in Nigeria it was evident that mobile phone dependency causes some negative impacts in the human functioning. It is not only affecting the physiological aspect but also the psychological life. This is how the researcher had described it: “Some of the effects of the overuse range from having an impact on academic performance to affecting physical and emotional wellbeing” (Ogushi et al., 2019).

Smartphone addiction was linked to symptoms of anxiety and depression among female undergraduates in Nigeria. Addictive smartphone behaviour is exposing to the risk of mental health issues (Popoola & Ayandele, 2019).

In Tanzania, some studies have stated that the use of mobile phone has a negative effect on the users. It has been observed that some adult people who are ordinary users of the mobile phones have developed some social and health issues. This situation is raising a great concern about the involvement of young people in its use. It was reported in Femina Magazine (2010), as cited by Mgaya (2020) that there is an increasing rate in the use of mobile phone among secondary school students. The report explained that 72 young people out of 97 access and own a mobile phone in Dar-es-salaam. It is also noted that more females own and access mobile phone than males with a ratio of 74 % and 26% respectively.

This was the result of Dietrich et al. (2021) study concerning the smartphone effect on the psychological wellbeing. The researchers looked at how cell phone use and possible sadness in young African people. More young women than young men matched the CES-D-10 criteria for probable depression, with over half of the sample meeting those criteria for major depressive symptoms. Young women had much greater rates of smartphone ownership and heavy cell phone use. In women but not in males, high cell phone use was independently linked to probable depression.

In Kenya, the smartphone use is also common among secondary school students. In a study done in Westlands, Nairobi, Mwadime (2015) noted that many students were using WhatsApp with a 52% response rate followed by Facebook with 42% response rate. The popularity of WhatsApp was attributed to it being an instant messaging application that runs on mobile phones and can be used everywhere, and thus allowed multitasking which students are known for. The findings showed how secondary school students are becoming more connected to the social media through their mobile phones.

According to Nyagah, Asatsa, and Mwania (2015) it was clear that many respondents acknowledged that they used social media. They claimed that social media has improved their ability to communicate with friends. They were able to make their own social networking profile public with its assistance. Researchers discovered an odd trend in social media use in Kenya. The investigation reveals that online addicts displayed a variety of depressive symptoms, i.e., pathological internet users display the harmful effects of poor social interactions. Additionally, they have psychological issues and perform poorly in school (Wamuyu, 2020).

This study conducted in Kenya came up with this report in connexion with mental issue related to mobile phone use. Concerning psychological disturbance, 49.5% of the respondents agreed to have experienced psychological disturbance whenever they were unable of using their mobile phones. Another group representing 40.4% reported to experience stress related to their mobile phone usage. Pertaining to whether the respondents get worried because of not having a mobile phone, 62.6 % of the participants could not support the idea of remaining or staying without a phone. Moreover, 68.7% of the respondents agreed that they have felt uneasy when it was impossible to access or use the mobile phones. Feelings of worry and uneasiness are

indicators that respondents experience anxiety related to their mobile phone use (Ndegwa & Mwangi, 2020).

From these findings, it was clear that the mobile phone is making some impact on its users. With the mobile phone penetration among the population across the globe, it is seen that very young people are accessing the mobile phone gadgets. The statistics are showing an increase in number of individuals acquiring a mobile phone gadget. In the past decade, most owners of mobile phone were adult people. It is quite interesting to notice these days that many young people are owning mobile phones. The increased number of Teenagers accessing the mobile phone seems to be the new trend. The study looked into the implication of the mobile phone dependency experienced by secondary school students and its interference on their psychological wellbeing.

1.3 Statement of the Problem

The mobile phone use was in increase among the teenage population. This access of young people to mobile phone was raising concerns at different levels and for different categories of people. Many parents were confronted to the reality of seeing their children absolved and spending a good amount of time in the use of mobile phone. Due to the use of mobile phone, children detached themselves from the family by losing emotional closeness. In the course of this mobile phone use, they forgot about other tasks they were supposed to undertake. Parents were equally concerned about the contents of what their children accessed through the use of the mobile phone which might exposed them to dangerous materials, affecting their mind and their moral behaviours. This was a very serious situation as the accessed information was not filtered or censured. Parents developed fear of seeing young people falling into the negativity bias.

Learning institutions were also concerned about the use of mobile phone by secondary school students. Many of these learning institutions have restricted the use of mobile phone or even prohibited its use for secondary school students. Despite the fact that mobile phone could be a tool for education, many learning institutions have decided to remove its usage among secondary school students. This attitude showed that there was an issue with the use of mobile phone by secondary school students.

In Kenya, as in many other countries across the globe, the government had introduced the ban of mobile phone use in schools. These regulations were clear indication that the use of mobile phone by secondary school students was not appreciated. This mobile phone ban policy has been adopted even by countries which promote freedom of the human being. When introducing the ban of mobile phone in schools, these Governments have foreseen some challenges related to its use for this section of the population.

These restrictions in the use of mobile phone adopted by school administrations and governments were not supported by any clear justifications. The fear of parents concerning the use of mobile phone by their children was also not grounded. The goal of this study was to find out the existence of any correlation between the mobile phone dependency and the psychological wellbeing of students of selected secondary schools in Nairobi County. The results of this study could inform the adoption of grounded regulations related to mobile phone use among secondary school students.

1.4 The Purpose of the Study

The main objective of this study was to examine the relationship between secondary school pupils in Nairobi County's psychological wellbeing and the time spent on mobile phones.

1.5 The Objectives of the Study

The general objective of this study was:

To assess the correlation between mobile phone dependency and the psychological wellbeing of students in selected secondary schools in Nairobi county, Kenya.

The study focused on the following objectives:

1. To determine the relationship between the amount of time spent in the use of mobile phone and the psychological wellbeing of students in selected secondary schools in Nairobi county.
2. To assess the motivating factors that contribute to mobile phone dependency among students in selected secondary schools in Nairobi county.

3. To establish the correlation between the frequently accessed mobile phone applications and the psychological wellbeing of students in selected secondary schools in Nairobi County.
4. To identify strategies used in the management of mobile phone dependency among students in secondary schools in Nairobi County.

1.6 Research Questions

1. What is the relationship between the amount of time spent by secondary school students in using their mobile phone in Nairobi County and their psychological wellbeing?
2. What are the motivating reasons that contribute to mobile phone dependency of students in selected secondary schools in Nairobi County?
3. What is the correlation between the frequently accessed mobile phone applications and the psychological wellbeing of students in selected secondary schools in Nairobi County?
4. What methods are employed in Nairobi County to control secondary school pupils' dependence on mobile phones?

1.7 Hypothesis

H01: There is no significant relationship between the mobile phone dependency and the psychological wellbeing of students in selected secondary schools in Nairobi County.

1.8 Significance/ Justification of the Study

The use of the mobile phone among secondary school students is common and is on the increase. It is therefore important to do research on this topic. This study is valuable as it shall provide significant contributions to different Stakeholders in Education and other areas in the Society.

The findings of this study are hoped to provide valuable information to parents and guardians on the implication of mobile phones on the wellbeing of their children. Therefore, parents and guardians will use this information for appropriate monitoring of their children.

The research findings will offer grounded information to the Education Sector, Education Stakeholders in policy making and for other consideration in handling secondary school students in relation to the use of the mobile phones.

In addition, the findings of this study will provide important information to the Government of Kenya in taking appropriate measures and in addressing the use of the mobile phones among young people in secondary schools. The study will help the Government to introduce preventive measures concerning the use of communication devices. Furthermore, this study will contribute to the body of knowledge about mobile phone effects on mental health. Moreover, it will be of great help to the counselling sector in addressing the mental wellness of secondary school students and of all the teenagers in general.

Finally, study will avail valuable information to help and promote responsible use of the mobile phones among secondary school students and other teenagers in the country. It will also provide data to other researchers for further studies in this field on mobile phone use among secondary school students.

1.9 Theoretical Framework

This study was based on two theories namely the social learning theory of Albert Bandura (1977) and the ecological model of Urie Bronfenbrenner (1979). The social learning theory acknowledged the importance of the interaction the social environment and the cognitive capability of an individual as determinant elements in behaviour. In the ecological model, more focus is put on the environment as it is divided in different sub systems. These subsystems are roots and explanation of human behaviours.

1.10 Scope and Delimitation of the Study

The study was focused on the use of the mobile phone gadgets. The geographical location of this study was the area administratively run by the county of Nairobi. The study targeted the secondary school students who are in Nairobi county as the population. Nairobi is a cosmopolitan city. It was a place where the issue of mobile was likely to be experienced. The population is knowledgeable about the topic of the study. The criteria of diversity could be easily met in the population. The study population comprised of secondary school students from public schools as well as private schools. The focus was on those attending day schools as they had the

opportunity of using their mobile phones after school hours. The exclusion criteria were applied on the students who were in boarding schools. The estimated ages of the respondents were the age bracket between 10 to 22 years. This age bracket was grounded on the fact that the Ministry of Education is much open on the matter concerning the age of students as described in following report. The Kenyan Ministry of Education does not have policies on students' age limits. At the age of 5 or 6 years, children join first grade and they complete high school at about 18 years. Although this is usually the case, it is not unusual to find 15-year- old students still in primary school and students over 21 years in high school (Lombo, 2015).

The chapter provided a general overview of the issue associated with mobile phone use around the world. It has presented the outcry of the matter under study and the importance of conducting this study. The general objective and key research questions of the study were laid forward by the researcher. The theoretical framework that was employed, the study's scope, and its importance were all noted by the researcher.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

While it is acknowledged that smart phones and other technology have improved communication, the usage of mobile phones also raises questions. In this research, the influence of excessive cell phone use was evaluated. This chapter examined the conceptual framework, relevant literature evaluation, research gaps, and theoretical framework. The literature review covered some studies conducted across the globe, this means outside Africa. It was followed by a literature review of studies carried out in Africa in general, and East Africa as a region. The literature review had equally covered researches done in Kenya.

2.2 The Theoretical Framework

The Social Learning Theory, developed by Albert Bandura in 1977, and the Ecological System Theory, developed by Urie Bronfenbrenner in 1979, served as the theoretical foundations for this study.

2.2.1 The Social Learning Theory

Albert Bandura developed the Social Learning Theory in 1977. In this section, the study looked into the principles of this theory, its strengths and limitations, and its application to the study.

2.2.1.1 Principles of the Theory

Albert Bandura is a psychologist of the twentieth century, claims Chuang (2021). He created the social learning theory, which is one of the most well-liked constructivism subtypes. The idea emphasizes observational cognitive processes rather than subsequent behavior. Bandura acknowledged the contributions that cognition and environmental reinforcement make to the explanation of behavior. His social learning hypothesis emphasized how people learn through vicariously experiencing things in a social setting. The first step in learning is to see a role model in a social setting, followed by cognitively remembering the knowledge that was observed. The learning outcome is not always connected to changes in behavior. The Social Learning Theory holds that any conduct is learned through potential encounters with the various socializing agents

to which one is exposed. When the children are experiencing these socializing agents, they will begin to see and develop their own abilities of mastering the behavior. In any social learning, there is need of these four elements, namely the imitation, the definitions, the differential associations and the differential reinforcements (Burdick, 2014).

According to the social learning hypothesis, people change their behaviour when they can pay attention, retain information, reproduce it, and be motivated. In this study, the Social Learning Theory had helped in understanding and explaining how the mobile phone overuse behaviour is present in young people. The social learning theory helped in understanding if the mobile phone dependency can be a product of a simple modelling.

2.2.1.2 The Application of the Theory

The application of the Social Learning Theory to this study was of help when looking forward in addressing the mobile phone dependency. The Social Learning Theory provided an understanding in the acquisition of the mobile phone dependency as a behaviour. The unlearning process must tackle the issues related to the attention, retention, reproduction, motivation of the adolescents towards the mobile phone. The importance of Social Learning Theory could help in addressing the type of modelling the secondary school students are exposed to. The social learning theory has provided ways of focusing both on the behaviour (mobile phone dependency) as well as on the role model (parents, peers).

This study developed an Integrated Learning Model to explain the acquisition of mobile SNS addiction through classical conditioning, operant conditioning, and social learning. A group of 523 participants in mainland China joined the study, which employed PLS-SEM to analyse the survey data. The findings indicate that the three learning models explained most of the variance in mobile SNS addiction. Specifically, use intensity, psychological enhancement, playfulness, and social identity in the Integrated Learning Model were jointly associated with the acquisition of mobile SNS addiction. Multi-group comparisons based on the number of mobile SNSs revealed that the greater the number of mobile SNSs individuals utilized, the stronger the relationship between psychological enhancement generated by them and mobile SNS addiction (Wang, 2019).

2.2.1.3 Strengths of the Theory

Social Learning Theory is well known and utilised theory. This is shown by the number of researchers using this theory and its application to various situation across the globe. The social learning theory has brought considerable benefits especially in education. It has served as a significant tool for the improvement of teaching methodologies.

This is how Bandura himself put his thought into words. According to social cognitive theory, people don't necessarily follow their own motivations or are automatically moulded and directed by their surroundings. Within a web of mutually reinforcing effects, humans act as contributors to their own motivation, behaviour, and development. We move on to the theoretical perspective's description of people in terms of a number of fundamental talents (Bandura, 1986).

In consideration to this study, the Social Learning Theory has offered a clear understanding of the acquisition of the mobile phone attachment. The Social Learning Theory states clearly that for one to acquire a behaviour, there is need of developing some attention to a certain displayed behaviour. It requires also the application of the memory as well as being capable of reproducing the behaviour and also being motivated for that. Mobile phone dependency shows that there is full participation of secondary school students in acquiring the mobile phone dependency.

According to Edinyang (2016), the Social Learning Theory is proactive in education sector. The native curriculum adhered to Albert Bandura's modelling and imitation philosophy. Role-playing, games, observation, demonstration, imitation, enquiring, self-teaching, and learning are just a few examples of the teaching techniques that are intended to encourage the transmission of norms and values to community members, especially the younger generation.

The fact that the Social Learning Theory takes into account various potential avenues for learning is another virtue of the theory. An individual is capable of learning through observation or direct experiences as reported in the following lines. Samsudin and Arif (2017) cited by Alshobramy (2019), acknowledged the importance of social learning theory in the in education sector.

According to McLeod (2016), the social learning approach recognise the importance of the thought processes by putting it into account. The method recognizes the part thoughts play in

determining whether or not to mimic a behaviour. The Social Learning Theory offers a lot of advantages, but it also has certain drawbacks with regard to this research. Although the good number of benefits that the Social Learning Theory is offering, it has also some shortcomings in relation to this research.

2.2.1.4 Limitation of the Theory

The Social Learning Theory is a useful framework for analysing how people pick up new behaviours. But the theory does not explain or provide enough details on the nature of some behaviour observed in some individuals.

The notion is flawed because it downplays the significance of being accountable for one's actions. Too much weight is placed on the environment when determining how a behaviour will develop. It has given the environment more importance. The theory assumes that society, not an individual's handling or processing of information, determines one's behaviour and actions. When it comes to duty, this is really regrettable. According to McLeod (2016), the environment is thought to be the primary factor influencing behaviour. It only considers behaviour from the perspective of either nature or nurture. This idea undervalues how complicated human behaviour is. There is a likelihood that behaviour is caused by an interaction between nature and the society. The theory cannot account for every behaviour. This is especially true when a behaviour is displayed in the absence of a clear role model for the person to follow. The hypothesis of social learning has received biological support thanks to the discovery of mirror neurons.

The common developmental milestones appear to be disregarded by the Social Learning Theory. While it is true that children do not develop at the same rates, regardless of the environment, some regular milestones may still happen. The hypothesis falls short of explaining all behaviour, especially when there is no obvious role model for the observer to follow. The hypothesis also ignores the role played by genetics in human development. These restrictions, which are discussed in the paragraph after, are being pointed out by certain scholars. In this approach, Burdick (2014) explains the restriction. The theory contends that youth learn through imitation of behaviours, but it is not sufficient. There are other genetic conditions, more

specifically psychiatric disorders, that may contribute to children's and adolescents' antisocial, maladaptive, or aggressive behaviour in addition to social learning.

Despite the few mentioned limitations, the Social Learning Theory remains a relevant theory for this study. The theory has numerous benefits as seen previously. It is a recommendable theory when it comes to behaviour and its acquisition. The Social Learning Theory was the main theory for this study. It was supported by the Ecological System Theory.

2.2.2 The Ecological Model

The Ecological model is the second theory which was used in this study. It was developed by Urie Bronfenbrenner in 1979. The study discussed the topic concerning the principles, the strengths and limitations of the Ecological System Theory, and its application to this research.

2.2.2.1 Principles of the Model

The Ecological model stipulates that for any human development, a human must interact with the environment. The individual has to be in relationships. These relationships are described as those experienced in family settings, in friendship, at schools, in the neighbourhoods, and the society at large. In order to create socially structured subsystems, Bronfenbrenner split the entire ecological system in which human progress takes place. The relevance of this theory is that it can explain the fact mobile phone brakes these existing subsystems in which human development occurs. The mobile phone user is able to explore or to come across complex subsystems which are not corresponding to his or her human development level.

According to Peppler (2017), the different systems in the ecological model are important in understanding the behaviour learning environment. According to Bronfenbrenner (1979) socialization always occurs in a context. It is embedded in a web of others and ever-changing contexts. Everything is contextualized. Without knowing the backdrop of a child's life, studying them can be difficult. These settings are all coherent. Both they and culture have an influence on one another. The ecological systems theory takes a dynamic approach to the subsystems. To discuss the development of humans, various subsystems must interact.

In accordance with Bronfenbrenner (1979), socialization always takes place in a context, and each given context is enmeshed in a web of related contexts that are always changing. A child who has been removed from their context does not exist. When "the child" is studied without the context, all the influences on the child are not fully understood. All of these situations can be viewed as environments or settings where people congregate, interact with one another, and are influenced by culture.

According to the Ecological Systems Model, interactions between a person and their environment are what lead to human growth. This process involves simple interaction moving towards complex interactions. The process of human development according to Bronfenbrenner moves from simpler sub systems to more complex sub systems. It is referred to as proximal processes (Tudge, Vargas, Liang & Payir, 2017).

2.2.2.2 The Application of the Model

In the Ecological System Model, the individual is not a passive element subjected to learning. The individual is in the system, and at the same time he is able of restructuring the system. This is a positive aspect of the individual in this theory of Bronfenbrenner. The Ecological model is recognising the role played by culture in the learning process.

According to SEM, there are multiple levels of influence on behaviour and these influences interact across different levels. The levels include intrapersonal, interpersonal, organizational, community, and public policy. Theoretically, each level independently acts on the outcome, and the effect accentuates further when the influencing factors interact across levels (Saquib, 2018)

One of the ideas addressing human development is the Ecological Systems Model. It explains how an individual move from one subsystem to another. In this process, the individual enters in contact with others and acquires behaviours in accordance with the environment. This theory of Bronfenbrenner was of help when analysing the way secondary school students are interacting and passing from one subsystem to another. As it is known, the subsystem starts with the simplest but progressing to complex subsystems. The introduction of the mobile phone might disrupt the normal succession of human development through different subsystems towards maturity age.

The Ecological Systems Model assisted the study in identifying the entry points of any problematic the mobile phone use. As the theory is proposing four subsystems, it was easier to determine at which level there is need of improvement or interventions. To put it simply, the theory has aided in the development of solutions for addressing the problem of mobile phones at the determined point of the problematic behaviour.

The Ecological System Model was very helpful in this study as it suggests that the individual is the product and the maker of subsystems. The Ecological Model is recognizing the intra personal resources such as knowledge, attitudes, beliefs, and even the type of personality to be in control in the development of any behaviour.

2.2.2.3 Strengths of the Theory

It has the advantage of making a clear connection between environmental change and human growth. Christensen (2016) asserts that the Ecological Model makes a significant contribution to understanding a person's function and behaviour in many circumstances. The model is an important resource for understanding and analysing the processes that shape human development. Some people, to a very large extent, see opportunities, whilst for others, difficulties and obstacles predominate.

The Ecological Model explains how the interactions of the individual within the subsystem and across subsystems are important for human development. The ecological perspective, according to Hayes, O'Toole, and Halpenny (2017), can help us understand how children and young people interact with one another as well as with various systems. When working with kids and parents, practitioners could find the social ecology perspective useful. It is an effective strategy to enhance work with kids, teens, and families since it can serve as a framework to bring together various, sometimes conflicting views. An all-encompassing strategy is the Ecological Systems Model. It accurately captures the dynamic character of actual family connections by taking into account all the systems that kids and their family are a part of.

2.2.2.4 Limitations of the Theory

The Ecological Systems Model has been utilized for its contribution in education and human development in general. However, some scholars have come up with some limitations related to its application. The Ecological Systems Model cannot explain the way things are happening in the human development.

The representation of the subsystems looks like they are in stages and in stairs. One has to mature from one subsystem before involving fully with the next subsystem. The life reality does not appear in a linear process. It is based on complex interactions of subsystems. Peppler (2017) asserts that the various systems are depicted as a layered hierarchy, with each system included within the following. The interconnectedness of the many systems may not be perfectly captured by the notion of nested, though. A network approach, on the other hand, would understand them as two separate systems that emerged in separate environments and impact one another through the patterns of social interactions between people who were directly and indirectly involved in the two systems.

In Ecological Systems Model, culture appears as part of the macro systems. Culture is part and parcel of human life. As argued by some Scholars, culture is or must be considered throughout the child development. These are the words Velez-Agosto et al. (2017) use to explain the ecological model's limitations. It is placing culture in the macro-system, but culture is normally spread across all life stages.

Despite these limitations, the Ecological Systems Model remained a valuable theory for this study. It has help in understanding the behaviour related to mobile phone dependency in secondary school students. The Ecological System Model of Bronfenbrenner coupled with the social learning theory of Bandura constituted a strong tool in providing understanding, meaning and orientation to this research study.

2.3 Literature Review

The literature review in this phase of the study concentrated on publications by other academics who have published on the same subject. The literature evaluation was conducted in accordance with the study's goals, which included examining issues relating to phone use and

welfare, driving forces behind mobile phone use, and applications used by secondary school students. The final section of the literature study examined techniques being used to control mobile phone use among secondary school pupils. The study described adult and young people's experiences with time spent using their mobile phones in this literature review for objective one.

2.3.1 The Influence of Duration in Mobile Phone Use and the Psychological Wellbeing

The mobile phone use consumes time from its users. The access of teenagers to the mobile phone services is in increase. The duration in terms of time spent by adolescents in the use of the mobile phone was the main focus in this section of the study.

In the USA, a study conducted by Egan (2016) arrived at this finding concerning the time consumed or spent by adolescents in the use of the mobile phone. The study was conducted in Chicago (USA), and the 158 participants were students who were recruited through email. The findings showed that some participants were between 7 and 10 hours daily in social media. This pattern in the use of mobile phone had generated issues in terms of sleep and concentration among others.

This study has given us important details on how much time teenagers spend using their phones. 158 respondents made up the study's sample size. Students made up the participants. The participants were chosen from the group of people between the ages of 15 and 18. Data collection was carried out using the questionnaire. The goal of the study was to determine how using one's own smartphone affected morality, risk-taking, psychological strength, and risk-taking behaviour. The study's guiding theory was the psychological power. The study did demonstrate that possessing a smartphone significantly contributed to psychological power. The researcher took into account secondary school students from Nairobi, Kenya, in the current study. The respondents were recruited for the age bracket between 10 and 22 years old. The Yamane sampling formula was used to calculate a proportionate size of participants. Two theories were guiding this study. A mixed method research design was employed by the researcher. A structured interview and a questionnaire were used to gather the data. Egan's study sought to evaluate the connection between psychological power and mobile phone ownership. The study wished assess the correlation between secondary school students' use of mobile phones and their psychological wellbeing.

In the U.S., the percentage of adolescents who report being online almost constantly has increased from 25% to 45% between 2015 and 2018. In addition, two large-scale studies among European adolescents, conducted in 2014 and 2015, showed that the prevalence of addiction-like problematic SMU was 4.5% and 9.1%. Other than adolescents who merely show intense SMU by spending a lot of time on SMU, adolescents with problematic SMU typically have a diminished ability to regulate their SMU impulses, feel discomfort such as stress or anxiety when SMU is restricted, and have SMU on top of their mind constantly. Research suggests that intense SMU is linked to lower mental, school, and social well-being of adolescents (Boer et al., 2020).

The research involved cross sectional and longitudinal surveys. Researchers from the USA carried it out. They anticipated that the prevalence of problematic and intense adolescent social media use would be higher in nations with better mobile internet access. The quantitative data were collected through a questionnaire. The inferential analysis showed that intense users reported lower levels of wellbeing. The current study was conducted in Nairobi. A questionnaire and an interviewing guide were used. For the analysis of quantitative data, both the Pearson's correction and the convergent mixed technique were used. The researcher wanted to assess the influence of the mobile phone use on the students in selected secondary schools mental wellbeing.

In South Korea, Cha and Seo (2018) conducted a study with 1,824 students from the middle schools as participants. They arrived at this finding. It is reported that 40% of adolescents and adults use smartphones for more than 4 hours a day to make calls and send messages. In addition, such people showed more problems in psychosocial, health, and technological dimensions, and they exhibited more preoccupation with smartphones and smartphone overuse as compared with those who used a smartphone for less than 4 hours per day. Similarly, when comparing to Europe, Cha and Seo said that smartphone users touched their phones about 10 to 200 times a day, for a mean duration of 10–250 seconds, and they used up 1–1000 megabyte (MB) data per day.

In 2018, the survey was conducted in South Korea. The primary goal was to gauge how much time teenagers spent using their phones. The study used 1,824 participants. It was a long-term study. Data gathering involved the use of a questionnaire. A Chi-square was used to analyse the data. The researcher concentrated on secondary school pupils in this study. The respondents

ranged in age from 10 to 22. The method was convergent parallel mixed. A questionnaire and an interview with guidance were used. The inferential analysis was conducted using the Pearson. The study was conducted in Nairobi County, Kenya, with the goal of examining the relationship between time spent and secondary school students' wellbeing

In India, a study was conducted by Vaidya, Pathak and Vaidya (2016) concerning the time spent by students in the mobile phone use. It had recruited 500 respondents among students aging from 18 to 25. But only 410 respondents were retained for the study. And the study came up with this outcome. In the matter of time spent by adolescents on the mobile phone, Vaidya et al. came up with this result. A rate of 41.03 % of the students used their phones for between four and six hours every day. A section of 25 % percent of the pupils in another group claimed to work between two and four hours per day.

College students in India participated in this research. study. The goal of the research was to ascertain the gender distribution of mobile phone use among students. The questionnaire was utilized by the study to obtain data. The research produced information on how male and female students use mobile devices differently. The current research examined the effect of mobile phone use on the wellness of secondary school pupils between the ages of 10 and 22. The study was carried out in the county of Nairobi. Data gathering methods include a questionnaire and a supervised interview.

In Enugu South Local Government in Nigeria, a study was carried out involving 249 pupils from 7 different secondary schools took part in the study. This conclusion was reached by Ajike and Nwakoby (2016). The various responder groups confirmed using their mobile phones for social media activities mostly for 2 to 6 hours per day.

The study had given insightful information on how much time secondary school pupils spend using their phones. The study's goal was to identify any concrete connections or relationships between secondary school students' use of social networking and their academic achievement. A questionnaire was used to gather the information. Simple percentage tables and frequency counts were used. The research aimed at determining whether using a cell phone has any effect on secondary school students' psychological wellness in Nairobi County. A

questionnaire and an interview served as instruments for data collection. The analysis of data was done using SPSS.

In Ghana, a study was conducted by Markwei and Appiah (2016) in two locations of Accra (Nima and Maamobi). The study involved 150 participants aging between 11 and 19 years of age. The researchers' findings show that individuals used their mobile phones on average for between one and nine hours every day.

The research was carried out in Ghana. Teenagers who were using cybercafés for internet access constituted the group of respondents. The age of the participants ranged from 11 to 19 years old. The study was focusing on the use of social media among young people. Both a mixed technique and a convenience sampling method were utilized in the investigation. The current study was conducted in Nairobi. It has used a mixed method with a focus on the convergent parallel aspect. The selection of participants used a multistage sampling method. The participants were recruited from secondary schools located in Nairobi. They were aging between 10 to 22 years old. The latest study concentrated primarily on the amount of time secondary school pupils in Nairobi County spent using their mobile phones and evaluated whether this had any effects on their psychological wellbeing.

In a study done in Benin Metropolis of Edo state, with 575 respondents, Kennedy (2020), came up with this results. The finding shows the number of hours' students spend daily on social media. It further showed that 29.0% of the students agrees that they spend between 1 and 3 hours daily using the social media network. 56.0% agrees that they spend between 5 and 8 hours daily using the social media network. 12.5% averred that they spend between 9 and 12 hours daily in using the social media network; and 2.5% of the students agreed that they spend above 12 hours daily using the social media network.

Data were gathered via questionnaire and interview in a descriptive survey research style. The study's goal was to ascertain how much time students spent using social media. The results showed that the research group spent, on average, 9 to 12 hours per day on social media. The sample size was selected using a simple random. The study population were the senior secondary school students. The study was carried out in Nairobi county. It used a mixed method. The objective was to identify the existing correlation between time spent and the psychological

wellness of students. The researcher used a multistage sampling method. Qualitative data were collected using interviews while the questionnaires served for the collection of quantitative data.

In Tanzania, a study was conducted in Mtwara area. The study had enrolled 60 participants aging from 15 to 19 years of age. The research study used a mixed-methods approach. The researchers made this discovery. The researchers found that the majority of the participants (52 %) were accessing the social media of daily basis while others were making it weekly. (Pfeiffer, Kleeb, Mbelwa & Ahorlu, 2014). The survey has revealed important details about how much time kids in Mtwara (Tanzania) spend in using their phones. The objective of the research was to evaluate the role that mobile phones play in advancing young people's sexual and reproductive health. The study employed a combination of methodologies. The respondents were selected for the age bracket between 15 and 19 years of age. This conducted study has employed also an embedded mixed approach. The quantitative and qualitative data were collected using a questionnaire and the interview. Students from Nairobi County's secondary schools made up the responders. The respondents' age ranged from ten to twenty-two years old. The goal of the study was to ascertain whether cell phone use and secondary school students' psychological wellness in Nairobi County

Two researchers conducted a study in Tanzania in 2017 to discover the time which are spent by young people in using their mobile phones. The study had recruited 120 secondary school students. The research arrived at this finding. The participants were asked describe their habit concerning the access to internet. A group of 52 respondents, making the majority of them (43.3 %) stated that they only used internet services whenever there was a need for that. Another group of 23 (19.2 %) indicated that they access the internet daily. More questions were asked of the participants who said they had access to the internet on how much time they spent doing that activity. The majority of respondents (40.8%) stated that they were spending an average of one to two hours on each task. Another group of respondents (21.7%) claimed to be online every day for between 31 and an hour. 19 of the participants (or 15.9%) said they spent an average of less than 30 minutes (Tarimo & Kavishe, 2017).

The focus of this study was on the time spent by secondary school students while using the internet. It came up with data which are showing the amount of time consumed by secondary school students in using the internet. The participants for the study were selected from Morogoro

municipality in Tanzania. The sample size was determined by simple randomness. Data collection was done using the questionnaire. The study concentrated on internet usage and the value it had for students. The current study looked at how much time secondary school pupils spent there and how that affected their psychological health. The research was conducted in the County of Nairobi. Participants in the study were secondary school pupils between the ages of 10 and 22. The research used a mixed method. Both quantitative and qualitative data were collected using a questionnaire and an aided interview.

Nyangesa, Kiprop, and Chumba (2019) conducted a study in Kenya to determine how much time young people spend using their mobile phones. The County of Bungoma served as the site of the study. A group of 600 pupils were chosen as the sample size for their study from 40 secondary schools located throughout the county. Boys', girls', and mixed-gender schools were used to choose the participants. The study's findings showed that participants spend daily an average of 30 minutes.

This study was a general survey concerning the social media consumption among students in secondary schools across the County of Bungoma, in Kenya. The researchers used a questionnaire for data collection. This study concentrated primarily on how secondary school pupils spent their time and how that affected their psychological well-being. The study was conducted in Nairobi County. The participants were being selected from secondary schools. The questionnaires and the interview guide were utilised for collection of quantitative and qualitative data.

Wamuyu, Kioko, and Kiprop (2018) conducted a longitudinal and cross-sectional study in Kenya with 3,269 participants, ranging in age from 14 to 55, and came up with the following findings on the time spent on mobile phone. According to the study, adolescents between the ages of 14 and 21 used their mobile phones on a daily average of two to three hours. The study was conducted as a longitudinal and cross-sectional surveys. The study had involved participants from various background aging between 21 to 35 years of age. The purpose was to know the amount of time different age group spent in the mobile phone use. The study managed to establish the amount of time spent by different age groups among Kenyans. In the present study the researcher made use of a mixed method with a focus on convergent parallel method. The quantitative data were collected using a questionnaire, and the interview for qualitative data. The

secondary school pupils in Nairobi County made up the study's population. The participants were chosen from the group of people between the ages of 10 and 22.

In Nairobi, a survey was conducted in 2018, and came up to this finding. In a comparative study, they found that people living in urban locations are consuming more time in the use of the mobile compared to those in rural places (Wamuyu et al., 2018). This research was both longitudinal and cross-sectional. It was aiming at various demographic groups, taking into account factors like geography, gender, and wealth. All ages of participants had taken part in the general survey. The quantitative data were collected using a questionnaire. The study concentrated on Kenyans' use of mobile phones. The secondary school pupils who made up the research population were the main focus of the current investigation. The goal of the research was to ascertain whether the use of mobile phone is correlated to the psychological health. The study employed a hybrid methodology. The study was conducted in the County of Nairobi.

This was the review of the literature related to the time spent in the use of mobile phone. All the literature covered is indicating that people young as well adults are spending a good number of time on the phone. In the next, the researcher looked at the factors which are fuelling the use of mobile phone by students.

2.3.2 Motivating Factors that Lead to Mobile Phone Dependency

In this section, the focus was on the identification of possible reasons or push factors which were making people to use their mobile phone. This assessment had included adult people as well as young people such like secondary school students. The literature review has provided some possible answers to that question regarding the purpose of using the mobile phone. The literature review had also offered the opportunity of coming across the motivating factors for people, including adolescents across the globe for spending much time in the use of their mobile phones.

In 2016, a cross-sectional study carried out in Australia and South Korea. The study identified the following reasons as the drive for adolescents to use the mobile phone. This is a report from a study done in an Asian country and Australia. In South Korea, young people favour using smartphones with advanced technological features. Australia published findings that were comparable. Adolescents rush to the mobile phones use because they can provide increased

multimedia offerings like reliable internet connectivity. It appears that young people in Australia want to purchase attractive smartphones (William, 2016). The study was a cross sectional study involving participants from two different countries. It had employed young people as respondents. The researcher intended to assess the kind of mobile phone that teenagers from the two ethnicities favoured. Data were gathered by a questionnaire in a survey-style investigation. The study was conducted in the County of Nairobi. The present study used a mixed method approach.

In India, a study was conducted in Klang Valley where many Asian cultural groups are found. They were 400 respondents. The researcher came up with this conclusion. The results showed they have few purposes in using mobile phone. Highest mean score 4.71 gained for the two items were respondents answered they are more frequently use mobile phone for chatting (e.g. WhatsApp) and browsing information in the internet. This is in line with other findings which mentioned online communication has become a global phenomenon and it is shifted to smartphone usage since traditional Short Message Service (SMS) system is gradually replacing the communication platforms (Munusamy & Ghazali, 2020). The study's objectives were to ascertain the extent of adolescent mobile phone usage as well as the extent of young cell phone addiction. A survey design was used in the investigation. It took place in India. The study was conducted in the Nairobi County. It used a mixed method. The quantitative and qualitative data were collected using a questionnaire and an interviewing guide.

A group of researchers (2016) carried out another study in India and reached this conclusion. Most students were engaged in social networking on their phones, but some were also listening to music. Another group of students were interested in playing games. The results showed that a great importance was allocated to social connection (Vaidya et al., 2016). The location of the study was the city of Pune, in India. The target population were the undergraduate students. The researcher enrolled 500 respondents, but 90 respondents did not show up. The number of 410 was retained as the sample for the study. The age bracket for respondents was between 18 and 25 years of age. The responses were gathered using a method known as purposive incidental sampling. The quantitative and qualitative data were collected by using a questionnaire and an interview guide. The city of Nairobi was the area of the study. Convergent

parallel mixed methodology was utilized in the investigation. The study's main focus was on mobile phone use and how it affected secondary school students' wellbeing.

A cross-sectional study that featured participants from several nations was carried out in Africa in 2013. This report was created by the compiling author, Ephraim (2013). Adolescents in Africa have been recorded among those using social media. According to studies, 30% of teenagers in South Africa spend their free time chatting on MXit. The study found that identical behavioural characteristics to those of their South African classmates were seen in Egypt. According to a study, 215 teenagers in Egypt used social networks for conversing, making that number 83 %. According to the report, 58 % of young people in Nigeria utilized social media to talk and send messages. South Africa, Egypt, and Nigeria—three African nations—were the locations of the study. The researcher used both secondary and primary data in the current investigation. For this investigation, both the Ecological Systems Model and the social learning theory were applied. The study was carried out in Nairobi. The secondary school pupils, who ranged in age from 10 to 22, were the intended audience. The quantitative and qualitative data were collected by using a questionnaire and an interview guide.

Markwei and Appiah (2016) conducted a study in the capital of Ghana, Accra. Researchers discovered that preserving social connections, making new friends, and having fun were the primary reasons people used their mobile phones.

The researchers were assessing the reasons for the mobile phone among youths. A questionnaire was used to gather the data. The respondents were aging between 11 and 19 years of age. The result showed that there was need of making awareness of the risks which is accompanied with the mobile phone. The current study was carried out in Nairobi. The target population was constituted of the secondary school students in Nairobi. The chosen participants ranged in age from 10 to 22. A guided interview and a quantitative questionnaire were used to obtain the data (qualitative).

In Nigeria, a study was conducted and arrived at this is the conclusion. According to Ajike & Nwakoby (2016), these were the motivating factors for the use of the mobile phone, mainly information, making friends and entertainment. Many of the 249 respondents cited the need for friendship and affiliation as being the most crucial. A survey design was used in the

investigation. Secondary school pupils who responded to the survey. A quantitative study was conducted. According to the report, parents and educators should support kids in finding a healthy balance between their usage of social media and schoolwork. In Nairobi, Kenya, the current study was carried out. It concentrated on pupils in high school. A mixed technique was used in the investigation. For quantitative data, a questionnaire was used, and for qualitative data, an interviewing guide. The study's main concern was how secondary school pupils' dependence on mobile phones affected their welfare.

In Francistown, Botswana, William (2016) carried out a study in which 30 people took part. The age of the participants was between 11 and 19 years old. The findings of that survey indicated that one of the reasons people use mobile phones is for communication. This study clarified the widespread use of mobile phones for social media and communication among young people in Botswana. They were utilizing their cell phone to send and receive text messages as well as make voice calls. They played mobile games, traded digital photos and movies, and did other online activities.

William employed a qualitative research methodology for his investigation. Interviews were employed to get the data. Regarding Francistown's teenagers' interest in mobile phones, it has offered significant facts (Botswana). The study's primary goal was to evaluate each participant's individual mobile phone using experience. The research project employed a mixed method approach. For quantitative data, a questionnaire was used, and for qualitative data, an interviewing guide.

Tanzania was the site of the investigation in two different places. One of the areas was urban, while the other was rural. The study involved 60 participants as responses. The respondents' age range was between 15 and 19 years. Finding the most popular social media site among teenagers was the study's main goal. A mixed method research strategy was employed in this research. The research was carried out in Nairobi. The secondary school pupils were the intended audience. The age of respondents was between 10 and 22 years old. The researcher used a mixed method.

In Kenya, a study was conducted by a group of Researchers (2018), and which had revealed that many Kenyans were using the social media for getting information, for

entertainment and for connections to others (Wamuyu et al., 2018). The study was done across the country and was involving about 3,269 participants from 8 counties. The study offered a clear picture on the motivating factors for social media need. The age bracket of the respondents was between 14 and 55 years. It was a poll. A survey was used to get the data. The research was conducted in Nairobi County. The secondary school pupils were the intended audience. The age of respondents was between 10 and 22 years old. The current research employed a mixed-methods approach. For quantitative data, a questionnaire was used, and for qualitative data, an interviewing guide. The study's main concern was how mobile phone use affected secondary school pupils' wellness.

In Kenya, another study was conducted by Muigai and Mantz (2019). The finding averted that teenagers were motivated to use the online social networking sites because the sites accorded them up-to-date information; Allow 24-hour communication, can disseminate multi-media information, Contain a lot of information on wide range of issues or topics relevant to them, give identity in life, give pleasure in communicating, are easier to contact people via online than talking, calling or posting a letter, are also used by their friends and acquaintances, are enjoyable, are simple and easy to use, are not used by my parents/ guardians, make them be at par with peers, make them less idle, removes feeling of loneliness. The social media provides them with the platform to do this.

The study was carried out in Nairobi's Westland Sub County. 306 people were enrolled by the researcher. This study concentrated mostly on the gambling element. In Nairobi, this study was conducted. All of Nairobi County's sub-counties have been taken into account. A mixed approach research design was adopted. For the purpose of gathering qualitative data, the interview guide was employed. The secondary school pupils between the ages of 10 and 22 were the intended audience.

Ndegwa and Mwangi (2020) conducted a study among university students in Nairobi. In terms of how often respondents used their mobile phones, 26.5 % did so to call, text, or talk with friends, parents, or other family members, while 21.5 % did so to access the internet. Additionally, 11.3 % of respondents used their phones to play games, compared to 19.3 % who used them to listen to music. Additionally, 10.8 % of the respondents' used their phones for downloading ringtones while 9.7 % used them for doing business. An additional 0.8 % of the

respondents' uses the phone for watching TV. Additionally, respondents claimed that students use their mobile phones for video and photo taking, music listening, status symbols, pornographic viewing, chatting, and movie watching.

In Nairobi, the study was carried out. The majority of the population were college students. Data from the respondents were gathered using an interview guide and questionnaire created by the researcher. Research for the current study was carried out in Nairobi. The secondary school pupils were the intended audience. The age of respondents was between 10 and 22 years old. A mixed method design was adopted for the investigation. For quantitative data, a questionnaire was used, and for qualitative data, an interviewing guide. The study's main concern was how secondary school pupils' use of mobile phones affected their psychological health.

It was reported that the social media platforms are becoming indispensable in this world. Social media is showing a real paradigm shift in the field of communication. The beauty of this new communication method is that it offers of virtual connectivity irrespective of geographical distances between users. The social media medium offers option for transmitting to others materials such as pictures, textual content, videos, and audio whenever it is convenient for the person (Madakam & Tripathi, 2021).

2.3.3 Mobile Phone Applications and the Influence on the Psychological Wellbeing

In this part of the study, the researcher has covered some literature which were talking about the frequently accessed mobile phone applications and their influence on the psychological wellbeing. This process of assessing the most used mobile phone applications was addressed through literature review covering studies conducted across the globe as well as those conducted in Africa.

In the United States of America, a longitudinal study was carried out by Thomee (2018). The topic of the research was the use of smartphone among young people. The study involved participants from different countries. The study reported cases of sleep, depression among other issues for those who have been spending much time on the mobile phone.

The study included several respondents from various nationalities and was both longitudinal and cross-sectional in nature. The study has given accurate information regarding

the influence of mobile phone use on mental wellness among teenagers in the US. It was an analysis of mobile phone usage in various nations. Research for the current study was carried out in Nairobi. The secondary school pupils were the intended audience. The participants were chosen from the group of people between the ages of 10 and 22. The study employed a mixed method. The quantitative and qualitative data were collected using the questionnaire and the interview.

In the recent days, there was a report filed by Frances which attracted the attention of the US Congress subcommittee on the negative effect of Facebook on the mental health of teenagers. Researchers may take this complaint made by Frances Haugen as a chance to advance their studies on how social media use affects adolescents' mental health (McKinnon & Tracy, 2021). This was a report based on the allegation of Facebook effects on teenagers. The undertaken study was focusing on the collection of primary information from respondents who could have been the affected people due to their mobile phone use.

The research was carried out in the USA to evaluate the effect of social media on adolescent mental health. Instagram was proven to have an effect on youngsters' mental health, according to internal Facebook research. It appears that many young people found the platform to be harmful. In a Wall Street Journal article, it was said that 32% of young girls who took part in the study believed that Instagram made them feel worse about their bodies (Clayton, 2021). The research involved a survey of teenagers in the United States of America. A mixed method was used. The same social media platforms were emphasized, but the respondents were students living in Nairobi. The age of the participants was between 10 and 22 years old. The quantitative data was collected using a questionnaire while the qualitative data by an interview. The impact of mobile phone use on secondary school pupils' wellbeing was the study's main focus.

This conclusion was reached in the USA by two researchers in another study they did in 2018. For a while, the Facebook platform dominated the social media scene among young people in America. However, a new Pew Research Center survey indicated that it was no longer the most popular online platform among teenagers. Today, about 51 percent of American teenagers between the ages of 13 and 17 use Facebook. This is a low rate compare to other peers across the globe who use more YouTube, Instagram, or Snapchat (Anderson & Jiang, 2018).

In the United States of America, a longitudinal survey was conducted for this study between 2014 and 2015. The respondents ranged in age from 13 to 17 years old. Data were obtained by applying a questionnaire. on the other hand, the present study was conducted in Nairobi. The study employed students as respondents. The age of the participants was between 10 and 22 years old. It used a mixed method. Data were collecting using questionnaires and interviews.

Egan (2019) conducted a survey in the USA to determine the most widely used social media platforms. This discovery was made by the researcher. Facebook, YouTube, WhatsApp, and Instagram were listed as some of the most popular social media networks. Chicago was the site of the study. A group of 75 students participated in the survey. The study's objective was to evaluate the most widely utilized social media platforms. The current study sought to determine how frequently used social media platforms impacted secondary school pupils in Nairobi County's psychological wellbeing. In Nairobi, the study was carried out. The secondary school pupils between the ages of 10 and 22 were the intended audience.

In the United Kingdom, a parliamentary report provided the following information concerning the social media use among teenagers. Social media and electronics have reportedly gotten more common in children's life. According to data compiled by Ofcom, 70% of kids between the ages of 12 and 15 have a social media profile. Social media has surely brought individuals from different parts of the world together and given them access to unparalleled immediate communication methods. The concerns have been growing about the effects of the social media access on the children physical and mental wellness (Lamb et al., 2019). This finding was from a secondary data consulted by the parliamentary committee. The 12- to 15-year-old teenage population was the study's target audience. Secondary school students were the intended responders for the current investigation. The participants' age ranged from 10 to 22 years old. The study was carried out in the county of Nairobi.

In Britain, Wolfers et al. (2020) conducted a survey on the attachment of some people on the mobile phone. They found that many respondents reported to touch the screen of the smartphones about one hundred and fifty times daily. They also found that when deprived of their mobile phone, some participants were displaying some withdrawal symptoms.

One thousand people participated in the poll that made up this study conducted by Wolfers et al. (2020). The research's participants were chosen from the general public. The study sought to understand how individuals respond when their mobile phones are taken away from them. Data was collected using a questionnaire. In the Kenyan County of Nairobi, this study was carried out. Secondary schools were used to find responses. The respondents were chosen from a group of people between the ages of 10 and 22. Convergent parallel mixed method research was employed for the investigation. The primary goal of the study was to ascertain whether mobile phone use and secondary school students' psychological wellness were related.

In a study conducted in Sardinia, Italy, Mascia, Agus and Penna (2020), came up with this conclusion while responding to the concern of what applications young people are accessing on their mobile phone. A survey was given to 152 young people (aged 13 to 18) using a cross-sectional mixed methods study design. Teenagers utilize social media at a rate of 94,6%, according to research. A group of 152 young people were the respondents. Nairobi served as the site of this study. Some secondary school students participated in this survey as respondents. The participants ranged in age from 10 to 22. Convergent parallel mixed methodology was utilized in the investigation.

In Australia, a study was conducted and came up with this finding. The frequent use and the access to social media had a cost on human life. The use of social media is reported to harm teens' mental wellbeing. First, teens that regularly used social media had increased anxiety. In a 2015 survey, Australian Psychological Society researchers found that Australian teenagers who used social media more frequently displayed higher levels of Fear of Missing Out; Fifty-four percent of these frequent users were concerned that their friends were having more valuable experiences than they were. This study demonstrates how excessive social media use can bring teens additional stress, especially when comparing their lives to their peers'. Anxiety also stems from worrying about one's own social media status. Reporter Kelly Wallace features a story about a 15 year-old's friend who was "freaking out" after not receiving her typical 200 likes emphasizing the psychological instability that results when teens take social media likes too seriously. Next, Wallace corroborates her argument with evidence from Diana Graber, a middle school teacher, who frequently overhears students discussing how many likes they receive and states that social media is "almost like a little competition. (Jarasunas, 2020). This investigation

was a survey. It took place in Australia. A sample size of 11,872 youths was used in the investigation. Glasgow University served as the project's primary supervisor.

Nabila (2020) studied the relationship between teen social interaction and cell phone use in Indonesia. The research discovered a bad association between the investigated variables. Mobile phone use was keeping individuals away from social connections. The research method was qualitative. The Interpretative Phenomenological Analysis served as the study's theoretical foundation. The three respondents were obtained using a practical sampling technique by the researcher. The age of the participants was between 15 and 18 years old. The present study was carried out in Nairobi. Secondary school students were used to choose the participants. The respondents in the present study were aging between 10 and 22 years old. The sampling process involved multiple stages. The social learning and ecological systems theories served as the study's foundation. It used a mixed method.

In India, Raj, Bhattacherjee, and Mukherjee carried out a study (2018). They produced this report. The data from 388 students were used in the inferential analysis. The students' average age was 15.1 years. There were 109 women and 229 men, or 68.6% of the total (31.4 %). A section of the participants representing 87.1 percent of the sample population used online social networking sites (338 out of 388). The majority of the 388 respondents said that WhatsApp was their favourite website. Facebook, used by 254 people (75.1%), came in second, followed by Instagram. The goal of the research was to evaluate the link between social media use and academic achievement. A sample size of 388 participants in the study who were at least 17 years old were gathered. Through the use of a self-administered questionnaire, quantitative data were gathered. According to the findings, addiction was present in 70.7% of cases and was more prevalent in people who were 17 years old and older. The current study concentrated on secondary school pupils between the ages of 10 and 22. This study was conducted in Siliguri, in West Bengal of India. Nairobi was the study area. The objective was to assess the correlation between time spent and the students' psychological wellbeing. A mixed technique was used in the investigation.

In Benin, a study was conducted by a group of Researchers in 2017, and arrived at this conclusion. They reported that the access and excess of the mobile phone among adolescents

were putting them at the risk of mental health issues. Cases of depression, suicide were among adolescents were linked to the smartphone (Kennedy, 2019).

This poll was conducted over time in Benin. The study was looking into the influence of social networking on secondary school students' academic performance in Benin Metropolis. A random sample of 575 people responded. Participants filled out a questionnaire to provide quantitative information. It was reported a positive influence of social media on the academic performance of students. They acknowledged that social media provided them with information about what they had learned in class. The students used social media as an alternative avenue for airing their thoughts. The present study was carried out in Nairobi. Students in the second level of education were chosen as participants. The age of the respondents was ranging from 10 to 22 years old. The researcher's sampling strategy involved multiple stages. The social learning and ecological systems theories served as the study's foundation.

In Nigeria, a research study was conducted by Ajike and Nwakoby (2016) on the social media and the academic performance of teenagers. They found that majority of the participants reported to have some academic issues in related to the frequent access of social networking platforms.

In 2017, a research was carried out in Zambia, and it produced this result. The survey indicated that when using social media, the majority of the participants found themselves caught in it. They used to say, "Just a few more minutes." Before engaging in any other activity, the kids checked their social media accounts. Only 22.4% of the pupils in the study's sample sensed social media dependency. Based on the respondents' observations, the study came to the conclusion that pupils displayed behaviors that might be associated to internet addiction (Akakandelwa & Walubita, 2017).

In Zambia, researchers conducted a descriptive exploratory study. A group of 240 pupils made up the study's sample size. The use of accessing social media platforms and its impact on social life were the study's main points of interest. Students in the second level of education were chosen as participants. The researcher's sampling strategy involved multiple stages. The study used a mixed method.

In Tanzania, a group of Researchers conducted a study in 2014. According to Pfeiffer et al. (2014), the use of Facebook by students was more common. It is a platform which offered many options in terms of communicating with others, sharing photos, videos and making friends. It was the most popular social media among adolescents.

Pfeiffer et al. conducted the study in Tanzania. The study used a mixed method. The researchers applied the questionnaire to 60 respondents who were aging between 15 and 19 years old. The objective was to assess how social media may be applied to reproductive health care. The study was looking in examining the association between social media use and psychological wellbeing of students. Convergent parallel mixed method research was employed for the investigation.

Muigai and Mantz (2019) conducted a research in Kenya regarding the use of social media. It was a survey that aimed to reach 1,000 respondents nationwide. That survey indicated that Facebook and WhatsApp were among the most popular social media platforms. However, the study found that among younger users, Instagram was the most widely used social media platform. WhatsApp was the most popular messaging platform across all age groups in Kenya. This study was a survey about social media use and behaviour across the globe. It had involved 54,000 respondents from 35 countries. 1,000 respondents were from Kenya. The age bracket for the respondents was from 16 to 45 years. In the current research, a mixed method was used. The respondents were chosen from among secondary school students in Kenya's Nairobi County. For the quantitative data and the qualitative data, questionnaires and interviews were used for data gathering.

In Kenya, Nyongesa et al. (2019) carried out research on how social media affects a person's wellbeing. This was the study's conclusion. A section of 348 students, or 58% of the overall sample, agreed that social media use makes people more stressed, depressed, miserable, and prone to mental disorders. 48 more participants (8%) were unsure about how to grade the statement. A rate of 34 % of the 204 students in this section did disagreed.

In this research conducted by Nyongesa et al. (2019), 600 respondents were recruited from 40 secondary schools. The study used a pragmatic philosophical paradigm and a mixed method. Data were collected using a questionnaire. This present study was conducted in Nairobi county. The participants were recruited among secondary school students. The age of the

respondents was between 10 to 22 years old. The sampling process involved multiple stages. The social learning and ecological systems theories served as the study's foundation. Using a questionnaire to get quantitative information and a structured interview to gather qualitative information.

In this literature review, the researcher covered some of the relevant studies concerning the motivating factors for people across the world in using the social media. The access to social media has been acknowledged by scholars. At this stage, the study was concentrating on finding policies and practices that had been implemented to improve student use of mobile devices.

2.3.4 Strategies Adopted for the Management of Mobile Phone Dependency

The mobile phone use by Adolescents has raised many concerns in the Society. These concerns have been experienced differently by people and at various levels. Some Parents are happy to see their children being reachable at any time, and some are also worried about the behaviour developed with the use of the mobile phone. Teachers are equally sharing the similar concerns when it comes to academic performance and concentration of secondary school students. Governments and others Stakeholders view the mobile phone as a tool which can be used in the promotion of academic accessibility and performance. The concerns are also raised about the potential harm of mobile dependency on the mental health of the youngsters. In all these considerations, the need of identifying strategies for a good management of the mobile phone is becoming paramount. This was the main topic that was covered in this section of the study. The literature reviewed in this area of the study included several pertinent studies that addressed the management and implementation of policies for mobile phone use among secondary school students.

The mobile phone use has been of great concern especially in the education sector. The mobile phone use has interfered seriously with the academic discipline and performance among others. The policy makers in the education sector are concerned about the issue of mobile phone use by students. They are fearful of the risk that the mobile phone might present in relation to academic performance. Recent discussions about the issue have occurred in numerous nations. Beyond specific rules at the level of each school, governments in several nations, including France, Israel, or some states in Australia, have outlawed mobile phones in educational settings (Beneitora & Chirivella, 2020).

According to the findings of this study, the school administration and even the local authorities have been provided a number of possibilities. This is an approach which was suggested by Teachers in some of the schools in the US. The total sample size was comprised of 210 schools. The study showed that 103 middle schools had a cell phone policy for students. During lunch and recess, these schools permitted pupils to use their phones. However, over 90% of principals wished to ban the use of mobile phone. Over 80% of principals said that using a cell phone in class could be detrimental to students' academic and social development (Pooja, Zhou, Mogan, and Christakis, 2020)

The results of a study conducted in the USA that was aiming at instructors and evaluated if there was a policy governing student use of mobile devices were as follows. According to the survey, 77 % of institutions have a policy on cell phone use while 91.6 % of principals thought there should be some rules regarding cell phone use. They developed various policies independently of their division, institution, or university. The principals of the schools that have a mobile phone policy said that their policy was successful in limiting unauthorized usage of mobile phones (54.1 %). Some schools have gone even further by punishing students for breaking the regulations of using mobile devices (Morris & Sarapin, 2020).

In 2014, a report from Japan was indicating that it was prohibited for children to the mobile phone after 9 pm. It was also reported the in Belgium, there was ban in selling mobile phones to people younger than seven years old. The same ban applied to the advertisement of phones to younger people. In Indonesia, the government has banned the access to mobile phone for students inside and outside school premises (Trucano, 2015).

The government of South Korea has acknowledged the seriousness of the problem of adolescent smartphone addiction. In order to address this issue, the Korean government established a Framework Act on National Informatization in 2013. Article 30 of the law mandates that preventative education on smartphone addiction be provided in all public and educational institutions (Cha & Seo, 2018).

A study on the exploring the influence the access to mobile phone was conducted in China. The research produced some recommendations for improved mobile phone management.

The results indicated that programs for health education in schools should include reducing excessive smartphone use. This could be accomplished by public service announcements, posters, or panels. According to the report, people should be cautioned against using smartphones in public places including buses, subways, and congested streets. The research calls for law to play a significant role in altering societal norms. Although it may seem impractical to pass legislation prohibiting smartphone use while walking, there are other regulations or standards with comparable requirements that might encourage people to alter their behaviour. Some offices and classrooms have banned the use of smartphones. The research is calling for more laws and regulations, including appropriate restrictions on smartphone use, which could have a ripple impact by altering social norms and public perception (Ding & Li, 2017).

A report on improved mobile phone administration was made in the United Kingdom. Dr Heather Woods of the University of Glasgow proposed the creation of wearable technology that could track teenagers' social media usage in real time. This approach would make it easier for parents and guardians to understand how their kids interact with others on a social level (Lamb et al., 2019).

In the Czech Republic, a study was conducted in order find out if schools have measure in place in managing mobile phone. This research report was based on empirical data collected from April to June 2019 in 32 schools in South Moravia. The use of mobile devices was subject to guidelines at every school. We asked if using cell phones in class or during breaks was permitted or not. Teachers for their entire school provided the data that we needed. We found that only 2 percent of schools allow adolescents to use their mobile phones in lessons, while 25 % of schools completely forbid phones in lessons. In 73% of schools, students can obtain permission from a teacher in exceptional cases. Exceptions for mobile phones in the classroom are mainly for study activities (e.g., a stopwatch, camera, searching for training materials, online exercises) and cases where a student needs to contact their parents. Regarding breaks, 54 % of schools allow mobile phones without limitations, 13% of schools have banned mobile phones during breaks, and, in 33% of schools, teachers can permit phones during breaks in exceptional circumstances, especially when parents need to be contacted (Kvardova, Valkovicova, Smahel, 2019).

A study was carried out in Spain on the way of monitoring the use mobile phone among adolescents. People came up with suggestions in order to track or prevent the excessive use of mobile phone by teenagers. The participants advocated for introduction of devices which can detect any use of the mobile by the adolescent. They were requesting the installation of other tools which might be capable of blocking highly distractive or dangerous social media apps (Fernandez, Vicente, Carrillo, Guilabert, Mira, 2020).

The need of regulating the use of mobile phone among teenagers was equally felt in Nigeria. Some studies were conducted in this field. To control student use of mobile phones, other suggestions, such the banning of phones, have been made. The government forbade students from using their phones in 2012 (Trucano, 2015).

The researcher reported the finding as the policy regarding the use of the mobile phone in the classrooms in a study done in Zambia's Kalabo District. According to rumours, Kalabo District school administration forbid students from using their cell phones inside the building. Even though cell phones are the most prevalent ICT in the region, this rule is still in place (Kabisa & Chibomba, 2018).

In Uganda, the government adopted also some measures in the management of mobile phone by school students. In 2013, the government of Uganda decided to effect the ban of mobile phones in schools. It was also reported that Malaysia had reaffirmed the ban of phones for students within and outside schools (Trucano, 2015).

The government of Tanzania created certain initiatives to control the access to mobile phone among students, particularly in high schools. Concerns concerning the use of mobile devices in secondary school education are pervasive. The Tanzanian government is still dedicated to advancing mobile technology use in schools as part of a plan to improve educational quality (Gibbons et al., 2018).

In Kenya, the concern about the mobile phone use among students has been felt. Some studies have been conducted for identifying the strategies to adopt in mitigating the phenomenon of mobile phones. it was left to the discretion of school administration to punish, by suspending, students found with mobile phone at school. Later on the Government decided to introduce the ban on the mobile use in schools (Nyangesa et al., 2019).

In Kenya, the Government came to ban the use of the mobile phone in schools due to others reasons than what denounced by mental health practitioners. It was due to issue related to the leakage of exams. The Kenyan ministry of education has outlawed pupils using cell phones in classrooms due to mounting worries about widespread usage of these devices in secondary schools (Kenya Human Right Society, 2017). Another study discovered that the Kenyan government's decision to forbid mobile phone use in classrooms was inconsistent with the country's mission to advance the use of new technology across all fields (Njihia, 2017).

In Kenya, some other stakeholders in the Education sector were advocating for the reinforcement of local policies on phone use into government laws. It was suggested that mobile phone could be used by students as an academic tool and under the monitoring of the teachers. There was need of recruiting social media experts in controlling and providing proper use of mobile phones among students. It was also recommended that teachers are empowered technically and legally in filtering the use of mobile phone by students in secondary schools (Nyangesa et al., 2019).

The literature review on strategies has helped to know how many people and institutions were addressing the issue cell phone and students. The study wished to investigate further in the time spent by students in high schools of Nairobi.

2.4 Research Gaps

The literature review had revealed that adolescents were spending a significant amount of time on their mobile phone. It has come out very clearly that adolescents are more concerned with entertainment, connecting to others among the main reasons of their mobile phone behaviour. There was some proof that teenagers were using a variety of social media platforms. The literature evaluation included the amount of time spent by students in high schools in Nairobi as well as the correlation between the time spent and wellbeing. This study focused on addressing the identified gaps.

In the literature review, it was found that the researches on the time spent by adolescents or teenagers in the mobile phone use, were used for the assessment of academic performance. In this study, the researcher was focusing on the impact derived from duration in the use of the

mobile phone on the psychological wellbeing, such as personal growth, depression and other effects among secondary school students in Nairobi county.

In the literature review, the attention of many researchers were focused on identifying the reasons for the teenagers spending much time on the phone. They were also interested in the applications which were liked by young people. The researches did not cover certain applications such as Snapchat, Tiktok among others. The way the Tiktok social media was described deserved a special attention while analysing its use and impact on the psychological wellbeing of secondary school students. Dilon (2021) claims that Tiktok was a brand-new platform that had just entered the social media sphere in September 2016. It soon rose to the top of the social media food chain. Worldwide, young adults and teenagers find the platform to be quite appealing. As a platform, Tiktok enables users to create videos that last for roughly 15 seconds. The software also enables the mixing of video segments, resulting in the creation of 60-second clips. Videos can include a variety of elements, like stickers, filters, rapid cuts, and music samples. The platform had almost 800 million users worldwide in February 2020.

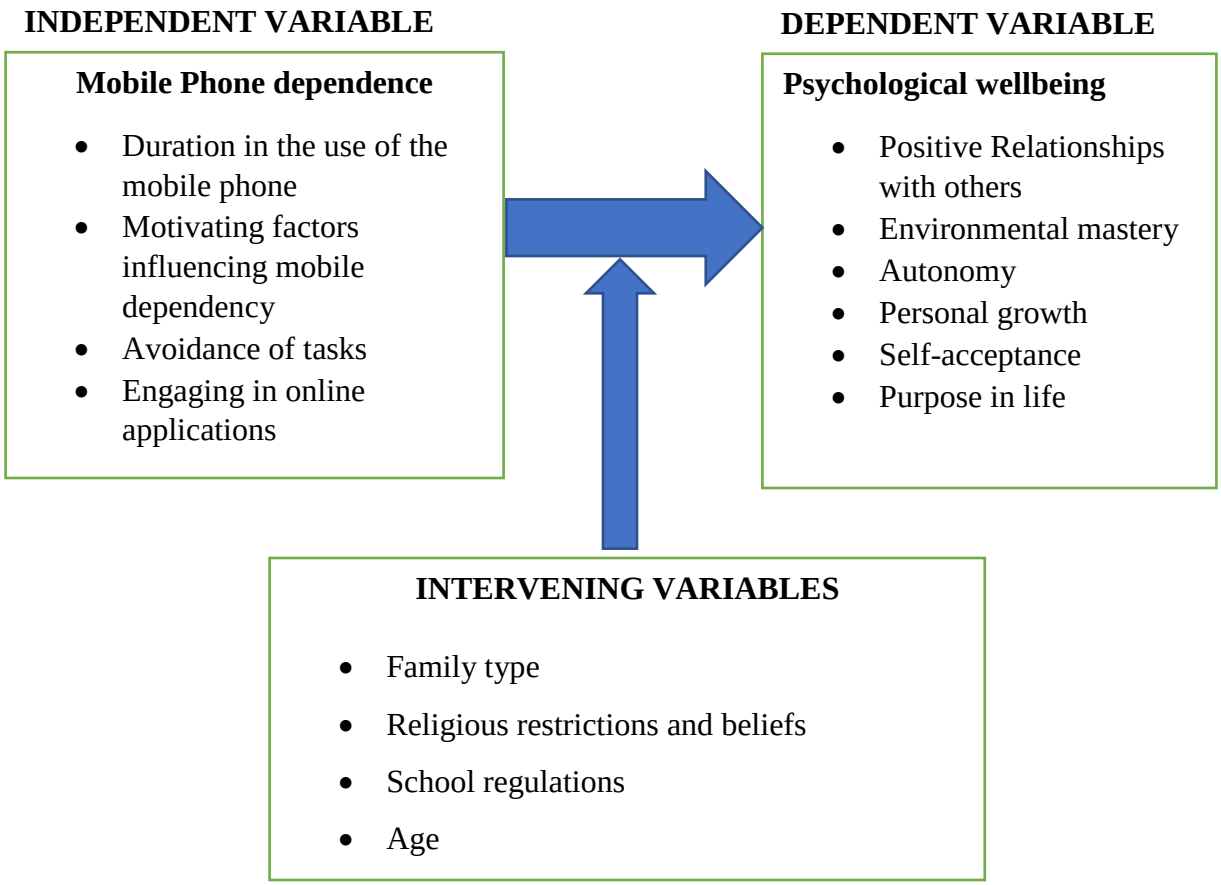
In this study, the researcher expanded on checking if there was any correlation between applications accessed and the psychological wellbeing of secondary school students in Nairobi County.

2.5 Conceptual Framework

The study intended to determine the influence of mobile phone dependency on the students' psychological health in Nairobi County. These were the variables for the study. The independent variable was stated as mobile phone dependency, and the dependent variable as the psychological wellbeing. The assumption from the Researcher was that, there ought to be a correlation between the two variables. This assumption stipulated that the independent variable was producing some influence on the dependent variable.

Figure 1

Relationships between Variables



The independent variable in the conceptual framework was the dependence on mobile phones. The dependent variable was psychological health. The dependent variable had to exist in order for the independent variable to exist, which it did. There was a strong possibility that the dependent variable would be equally influenced in either direction when the length of mobile phone use was changed. However, the independent variable would not be affected by the dependent variable in any way.

2.6 Conclusion

In this chapter, the theoretical framework was discussed among others topics. The four study goals were covered by the literature review in a comprehensive manner. It captured the research findings related to this topic and was conducted across the globe. The chapter looked at the conceptual framework as well as at the research gaps.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

In this chapter, the main focus is on the methodology used in the study. The research design, the study area, the study population, the sampling procedures, the sample size, data collection instruments, pilot testing, data quality control, data collection procedures, data analysis, data presentation and the ethical considerations are also discussed.

3.2 Research Design

The methodology is seen as systematic path of solving a problem in research. A research design can be understood as a blueprint adopted by a researcher before initiating data collection and data analysis. According to Shanti and Alok (2017), research methods are inclusive of all the techniques and methods which are undertaken for conducting a research.

This study used a convergent parallel mixed method research design. The convergent parallel mixed method design was useful to this study because it helped in collecting the quantitative and qualitative data simultaneously from the same respondent. The assumption of this method was that what would not be captured by the quantitative approach would be collected through qualitative approach and vice versa. Roomaney & Coetzee (2018), stated that in this design, both the quantitative and qualitative strands of the study were running simultaneously. Furthermore, both quantitative and qualitative data occur simultaneously, they take place within the same phase of research. As such, both strands are prioritised equally. Each strand takes place independently until the analysis of data is complete. It is only at this point that the results are mixed and interpreted together.

The convergent parallel mixed approach gave the researcher the opportunity to conduct interviews with respondents in addition to administering the questionnaire to participants. The mixed method is a recommended approach as it cross-validate the outcomes of data. In order to make the study more robust overall than if only one qualitative research method or one quantitative research method had been utilized, it involved using both approaches, i.e., quantitative and qualitative. A questionnaire was given to the responders in order to gather quantitative data. Then, in order to gather the qualitative data, they were replying to certain open-

ended questions. For the purpose of gathering qualitative data, a guided interview with the main informants was conducted.

3.3 Study Area

The study area was the place where the research was done. In this investigation, the study was carried out in Kenya's Nairobi County. It is a metropolitan city with a study population filling the criteria of diversity, knowledgeable among others. Nairobi was a place with the mobile phone phenomenon a matter of concern. To the north and west, Nairobi County has a boundary with Kiambu County. It has a border with Machakos to the east and Kajiado to the south. The county covers 696.1 Km2 in total. The county is situated between latitude 10 18' South and longitude 360 45' East. The location of it is 1,798 meters above sea level. The County is subdivided into 17 sub-counties namely Westlants, Dagoretti North, Dagoretti South, Langata, Kibra, Roysambu, Kasarani, Ruaraka, Embakasi North, Embakasi Central, Embakasi South, Embakasi South, Embakasi East, Embakasi West, Makadara, Kamkunji, Starehe and Mathare (Committee, 2018).

3.4 Study Population

The individuals, dyads, groups, organizations, or other entities that one aims to understand and to whom the study's findings may be extrapolated or applied are referred to as the population. The idea of population aids in setting limits for a study's field of inquiry. These restrictions naturally delineate the scope of the inquiry and allow the researcher to concentrate (Casteel & Bridier, 2021). All secondary students attending schools in Nairobi County were included in the target group for this study. In Nairobi County, there were 386 secondary schools as of the most recent Ministry of Education statistics (2019). A total number of 99,746 pupils were enrolled in these secondary schools as a whole. However, the overall student population from the 7 chosen schools served as the study population or accessible population. 3,324 students were enrolled in these 7 institutions. The 7 schools were selected from Langata Sub Conty (4), Dagoretti North (2) and Kibra (1).

The education sector remains dedicated to offering all Kenyans a high-quality education. It offers all Kenyans a place to pursue science, technology, research, and skill development. The education sector is working to create a society that is fair, cohesive, and has inclusive and

equitable social and economic development. Kenya has developed a plan for the education sector for ten years to come. The education sector is also concentrating on attaining the goals of the Kenya Constitution 2010, which was adopted in 2010 (ERS). Reforms are being implemented in the sector to increase inclusivity and access at all levels. By doing this, it has been made sure that the educational system encourages creativity and lifelong learning (Ministry of Education, 2021).

3.5 Sampling Procedure and Sample Size

Sampling is a major step while conducting a research. It helps in reducing the target population to a workable number of people, called sample. The process of selecting a statistically representative sample of people from the target group is known as sampling. Sampling is a crucial strategy in research investigations since it aids in selecting the right study participants. A good sample is one that statistically represents the target population and is sizable enough to provide an answer to the research issue (Majid, 2018).

This study used a multistage sampling procedure. The introduction of different sampling methods at different level of the sampling process was applied. This process led to the drawing of the final sample size for the study. The researcher applied a cluster sampling method at the first level. In this process, Nairobi County was divided into three clusters based the income level as reported in the study conducted in Kenya by Wamuyu and Lomoywara (2020). Based on that subdivision, the 17 Sub Counties of Nairobi were regrouped into 3 clusters. Cluster A was for Sub Counties with higher income. It had two Sub Counties, namely Westlands and Langata. Cluster B was for the Sub Counties with middle income: Dagoretti North, Dagoretti South, Roysambu, Kasarani, Embakasi East, Kamkunji and Starehe. The cluster C regrouped the Sub Counties with low income. These were the sub counties of Kibra, Ruaraka, Embakasi North, Embakasi Central, Embakasi South, Embakasi West, Makadara and Mathare.

After regrouping the 17 Sub Counties in 3 clusters, then a ratio of ten percent according to Mugenda and Mugenda, (2003) as cited by Rotich and Kiprop (2017) was applied to each cluster in order to determine the Sub County to be selected for the study. And the Sub Counties were selected randomly. There were 2 Sub Counties in cluster A, and Langata was chosen as the Sub County after adopting a random sample method. There are 7 Sub Counties in cluster B, and Dagoretti North was chosen at random from among them. There are 8 Sub Counties in cluster C.

After applying a random selection, the Sub County of Kibra was kept.

At this stage, it was important to determine the number of schools which were in each of the 3 selected sub counties. Langata sub county had 39 secondary schools, Dagoretti North sub county was home to 20 secondary schools while Kibra sub county had 7 secondary schools. The researcher applied the Mugenda and Mugenda formula of considering 10% of the schools from each of the selected sub county. Mugenda and Mugenda (2003), cited by Rotich and Kiprop (2017) recommends that a sample size of at least 10% of the target population was usually appropriate for social science. When applying this formula to the selected sub counties, the results came as follows: 4 schools were selected from Langata sub county, 2 schools from Dagoretti North and 1 school from Kibra sub county.

In each cluster, a probability sampling was used for selecting the schools that would be part of the study. The 4 schools to be selected from Langata Sub County had a total population of 1,520 students. The 2 schools selected from Dagoretti North Sub County had a total population of 1.304 students. The 1 school selected in the Kibra Sub County had a population of 500 students. A total of 3,324 students formed the study population. The sample size was determined based on the study population. The Kenyanlife website was the source of the statistics regarding schools.

At this point, the researcher used Yamane formula to calculate the sample size. Anyoke (2020) claims that “Taro Yamane's (1967) formula has been simplified. It aids in calculating the sample size proportionately. With a 95% confidence level and a population percentage margin of error of 5%, the Yamane formula approximates well-known sample size formulas like the Krejcie, Morgan, and Cochran formulas”.

The study employed the Yamane formula, with a confidence level of 95% and a margin of error of 5%.

$$n= \frac{N}{1+N(e)2}$$

In this formula: n = Sample size; N = the population; e = margin of error.

This is the detailed presentation of how the Researcher will arrive at the sample size:

n= 3324/ 1+3324(0.05)2

n= 3324/1+3324(0.0025)

n= 3324/1+ 8.31

n= 3324/9.31

n= 357.03

n= 357

After determining the sample size, a stratified sampling method was applied. The rationale for the choice of a stratified sampling method at this level was that the number of students varied from one school to another. The stratified sampling method helped in allocating proportionately the number of participants according to the size of their stratum. In this study the strata were the 7 selected schools. The formula for stratifying a sample was to take the population of the school and multiply it by the sample size and divide the result by the total population. According to this formula and considering the sample size of 357 sample units, the participants from cluster A were 163, from cluster B, they were 140, and from cluster C, 54 participants. The 7 School Discipline Directors were purposefully included in the study. A total of 364 people completed the sample in its entirety.

3.5.1 Research Sampling Matrix

Table 1

Sampling Matrix

NAIROBI COUNTY	**SUB COUNTY SELECTION**	**SCHOOLS SAMPLED MUGENDA FORMULA)**	**TOTAL SAMPLED**	**TARGET POPULATION**	**SAMPLE SIZE (YAMANE FORMULA)**
CLUSTER A 2 SUB COUNTIES	1 Sub County from Cluster A (Langata)	4 sampled schools out of 39 schools in the sub county	4 schools (310+590+330+290 students)	1520	163
CLUSTER B 7 SUB COUNTIES	1 Sub county from cluster B (Dagoretti North)	2 sampled schools out of 20 schools in the sub county	2 schools (945+ 360 students)	1305	140
CLUSTER C 8 SUB COUNTIES	1 Sub county from cluster C (Kibra)	1 sampled school out of 7 schools in the county	1 school (500 students)	500	54
				3324	**357**
KEY INFORMANTS	Discipline School Directors	7 Discipline School Directors			7
TOTAL SAMPLE					**364**

3.6 Instruments for Data Collection

A study requires to secure the instruments for data collection. The tools can vary in complexity according to the complexity of the research question to be handled. They do vary also considering the type of research design adopted by a researcher. The type of tool determined the way of its administration. It was crucial to keep in mind that each tool can be better suited for specific types of data collection than others. Therefore, it was advised that accurate and organized data collection methods be used when doing scientific research. The act of gathering data gave the researcher the chance to compile the data she required for the subject at hand. Document review, interviews, questionnaires, or a combination of these techniques were frequently used for data collection.

The researcher used two instruments namely the questionnaire and the interview guide. A questionnaire, as defined by Pandey and Pandey (2015), citing Barr and Goode, is a list of questions that are systematically sent to a subset of the population in order to gather data. For data collection in this study, the researcher used both custom-made (22 items) and standardized tools (18 items). The Ryff scale instruments, created by Ryff and Keyes in 1995, were used in the investigation. It is a Likert scale with answers varying from strongly agree (1), somewhat agree (2), a little agree (3), never agree or disagree (4), a little disagree (5), somewhat disagree (6), and strongly disagree (7). The standardized instruments had 10 reversed items. The scoring of the Ryff relies on the value of the Mean and Standard Deviation of the inferential statistics. It is important to understand the Mean and Standard Deviation when determining the degree of psychological wellness. When the scores of the standard deviations is 1.5 above the mean, the results are considered to be high well-being. When the standard deviation score is 1.5 below the mean, there is a low level of wellbeing (Ryff & Keyes, 1995). The Ryff scale has been used by many scholars in measuring the wellbeing. They found that it is a recommendable scale though it requires more adaptation. According to Abbott et al. (2010) a second-order well-being factor loaded by four of the dimensions achieved higher measurement precision and greater score accuracy across a wider range than any individual dimension. Future development of well-being scales should be designed to include items that are able to discriminate at high levels of wellbeing.

The study used an interview guide for qualitative data collection. The interview guide had two set of items. The first set of items was meant for students in order to capture their opinions in relation to the objective of the study. It had 6 items. The second set of the interview was prepared for the director of discipline in schools. The study used a deductive research approach. It had in advance identify 4 themes in accordance with 4 study's objective.

A group of researchers reported the following. The scales of this version revealed better reliability and adequate goodness of fit indices for the six-factor model, as proposed by Carol Ryff's PWB theory. Although further research focused on the psychometrical properties reanalysis of this shortened version of SPWB is needed, this article provides a contribution to the research and intervention on positive mental health during adolescence (Fernandes et al., 2010).

The report of the study conducted by Cheng and Chan (2018) showed that there was need of improving the Ryff's scale. Their study validated a Chinese version of the SPWB, which was drawn on in the present study. Cheng and Chan selected four items for each sub-scale based on a rigorous process of item selection. Yet, the reliability (Cronbach α ranges from .55 to .70) and construct validity (CFI ranges from .79 to .93, SRMR ranges from .058 to .099) seemed to be inadequate according to the commonly accepted criteria. They suggested that further refinement of items was necessary in order to gain a more psychometrically sound measure of PWB for Chinese samples (Gao & McLellan, 2018).

3.7 Pilot Testing of Research Instruments

Pilot testing was recommended before proceeding to the real data collection in the field. The purpose of a pilot testing in a research study is to aid in improving the quality of the instruments for data collection. The pilot testing is beneficial as it contributed to the testing of the reliability of the instruments.

It is recommended to conducted a pilot testing in order to assess the viability of approaches, methods, questions, and interviews as well as how they work together in a specific setting. The pilot testing may also highlight practical and ethical problems with the investigation. Thus, among other benefits, pilot testing aids researchers in finding design problems and improving data collection tools. If participants have trouble completing the questionnaire, the

researcher may decide to tweak the language of the items, rearrange the questions' order, or change the instrument's format (Fraser, Fahlman, Arscott & Guillot, 2018).

The pilot study for this research study was conducted in 3 secondary schools different from those which were selected for the main study. 1 school was chosen randomly from each cluster. Four pupils and one principal were chosen by the researcher from each of the three schools. There were 15 responders in total that took part in the pilot testing. The questionnaire was applied to the respondents, and the results coded in the SPSS. The aim of this exercise was to perform a reliability test. The reliability test produced a value of 0.72. The guided interview was conducted with the 3 Heads of schools. The exercise helped in improving the quality of the instruments.

3.8 Data Quality Control

Data quality control entails that the process of gathering, coding and computing information is done in a manner which is not prompt to error. The presence of error in the data affects its quality. This is one of the reason for maintaining a high level of control on data collection for its credibility.

3.8.1 Reliability and Validity of Instruments for Quantitative Data Tools

Pilot testing was done to test the instrument's dependability. With the results of the pilot testing, the researcher was able to calculate the reliability of the questionnaire by using the SPSS software. The pilot testing of the questionnaire helped in identifying its reliability. The value of 0,72 was the reliability for this study. The instruments were reliable and were consider for the study.

The two factors of face validity and content validity were more of a worry in terms of validity. The degree to which the research instruments are seen subjectively as measuring what they are intended to assess is what the face validity examines. The use of proper language can be of great importance among other aspects. In this study, the face validity was assessed by the continuous review by the supervisors and the examiners. The instruments were also tested in real situation during the pilot testing.

The other issue surrounding the validity of instruments was the authenticity of the content. It looked at whether a study tool actually recorded the sample behaviour it was meant to measure or identify. In this study, the draft tool was submitted to three experts on a voluntary basis for review, correction, and recommendations in order to examine the content validity of the generated tool.

3.8.2 Trustworthiness and Credibility for Qualitative Data Tools

Trustworthiness is a key concept while undertaking a qualitative study. "Trustworthiness is one of the ways a researcher can persuade themselves and readers about the veracity of the findings", according to Nowell, Norris, White, and Moules (2017). In social sciences, the concepts of credibility, transferability, dependability, and confirmability serve to offset the concept of trustworthiness. In this study, the criteria for believability were examined. The researcher meticulously gathered the original data from the field. This process helped the researcher to acquaint with the environment in which data collection was conducted. The researcher ensured that data were collected properly and correctly. Concerning the criteria of transferability, the researcher used standardize data collection tools. The criteria of dependability were ensured as the instruments for data collection were logical, well documented and grounded.

3.9 Data Collection Procedures

In this study, the researcher used the questionnaire for gathering information from the respondents who were secondary school students in Nairobi county. In this study, the researcher utilized a mixed method approach. The collection of data was done simultaneously for the quantitative data as well as for the qualitative data.

The collection of data on the field followed an ethical as well as an administrative protocol. After the construct of the instruments, and after securing all the authorization for conducting the research, the researcher got prepared for the field work. The necessary contacts with the management were done in due time. The sample size was communicated to the school management. The questionnaire was printed according to the number of the sample size. The questionnaires were self-administered.

The School Administration and the Respondents received a debriefing about the goals of the study, the issue of confidentiality, and how the findings would be used. The respondents were

then given the questionnaire to complete and submit their answers. The time allotted for answering the questions was reasonable. After the process was complete, the researcher collected the questionnaire and thanked the Administration and the Respondents.

3.10 Analysis of Data and Presentation

Data analysis is the task of arranging material collected from the field, and processing it in order to come up with meaningful information. Kaul, cited by Pandey & Pandey (2015), defines and describes data analysis as, studying the organized material in order to discover inherent facts. Collected data can be studied from as many angles as possible to explore the new facts. Data analysis embraces a whole range of activities of both the qualitative and quantitative type. It is a usual tendency in behavioural research that much use of quantitative analysis is made and statistical methods and techniques are employed. The statistical methods and techniques have got a special position in research because they provide answers to the problems.

The process of grouping the obtained non-numerical information into categories and applying numerical codes is referred to as quantitative coding. In statistical software, numerical coding is controllable and offers quick data conversion and measurement comparisons. Coding, according to Skjott and Korsgaard (2019), is the most fundamental and straightforward activity of locating meaning-rich segments in the data and assigning them a code. This was the process that was used to handle the field data. Data coding was the initial task following data collection. The coding of data often requires the process of transforming data points from the research instrument into a set of numbers in order to be read by the statistical software.

The Pearson product-moment correlation, which is a measure of a monotonic connection between two variables, was also used by the researcher (Schober & Schwarte, 2018). Zaid (2015) claims that the correlation measures the strength and direction of a relationship between two variables. If the outcome is 0, there is no link between the variables. When r is positive, there is a tendency for one variable to rise along with the other. When r is negative, there is a tendency for one variable to rise while the other falls.

3.11 Ethical Considerations

It is important when conducting a research study to consider the ethical aspects. It is a way of respecting the people involved in the research and also acknowledging the sensitivity of information which a researcher can come across. Ethics can be described as well-established rules and guidelines that defines their conduct. Research ethics is important in our daily life research endeavours and requires that researchers should protect the dignity of their subjects and publish well the information that is researched (Akaranga & Makau, 2016).

Ethical considerations are then understood as the attention, attitudes of making sure that the research is conducted in a manner which is not detrimental to the life and values of the respondents. Some guidelines have been established in order to assist researchers from harming respondents, and protect the respondents from potential abuse resulting in the conduct of the research. The researcher received an introduction letter from the University. It was a proof that the researcher had the necessary academic background for conducting a research. The researcher got a research permit from the National Commission for Science and Technology (NACOSTI). The researcher then proceeded to other offices such as the office of the County Commissioner and the County Education among other offices in order to receive permission, acknowledgment and support. The researcher met with the relevant school authorities where the study was to be conducted. The school authorities arranged for meetings with students in order to collect data. The researcher explained to the respondents the purpose of the study. The consent form for participating in the study was signed by the school authority in charge as well as the respondents themselves.

The researcher provided to the participants a debriefing on the research topic. This exercise provided ground for an informed consent. All research respondents must voluntarily and formally consent to participate in research after having been informed of the potential risks and benefits of their participation. They must be able to withdraw from the research at any time (Kazak, 2017). The researcher ensured that the requirement of anonymity and confidentiality was well observed. According to Arifin (2018), it is necessary to protect the participants' anonymity and confidentiality. The researcher made sure that respondents were not asked for any personal information, such as names, phone numbers, or addresses.

The researcher did abstain from using the information collected from other sources without acknowledging it. The researcher kept the information as the way it was and no manipulation was not allowed. The researcher stayed away from fabrication, falsification, and fraud method as unethical for my research study. This study followed and maintained a highly standard in regard to the matter of ethical considerations.

Conclusion

Several subjects pertaining to the research design, the study area, and the study population were covered in this chapter. The study also examined additional factors, including sampling practices, methods for calculating sample sizes, and methods for gathering data. The researcher also discussed issues pertaining to data quality control, pilot testing, and how to organize data analysis and presentation. The chapter's conclusion included an explanation of how ethical standards were upheld during the course of this research investigation.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Introduction

The objectives of the study consisted of determining the influence of duration in mobile phone use on the psychological wellbeing among students in selected secondary schools; assessing the motivating factors that contribute to mobile phone dependency among students in selected secondary schools; establishing mobile phone applications that influence the psychological wellbeing among students in selected secondary schools; and identifying strategies in place in the management of mobile phone dependency among secondary school students in Nairobi County.

The conclusions supported by the data gathered by using a questionnaire and interviews were the main topic of discussion in this chapter. The study's objective was to evaluate any connections between secondary school pupils in Nairobi County's mobile phone dependence and their psychological health. The demographic information on the respondents was included in the chapter, which also included data analysis, data presentation, and a brief discussion of the conclusions in relation to each objective.

4.2 Response Rate

A total of 357 respondents from secondary school students in Nairobi county made up the study's sample size. The researcher managed to reach out the all 357 respondents. The feedback from the respondents was not as expected. From the 357 self-administered questionnaire distributed to the respondents, 14 questionnaires were returned without being fully filled. The 14 incomplete questionnaires, representing 4 percent of the sample size, were discarded. The researcher remained with 343 questionnaires which represented about 96 percent of the selected respondents. The response rate is important in research. It shows the level of participation in a study. According to Meterko et al. (2015), the higher response rates means that all subgroups have been included in the study. Some scholars recommend a response rate as low as 60 percent.

4.3 Demographic Characteristics of Respondents

The significance of the demographic characteristic is that it helps in understanding the population under study. It equally provides important information to future researcher focusing on a similar topic. The study looked at some of the important demographic characteristic of the population.

4.3.1 Age Distribution of Respondents

Age is an important factor in any given study, as it might determine the way a person is handling life experience events. The age factor was equally retained for the study hoping that it could give clue on the development and the maintenance of certain behaviour.

Age of the Respondents

Table 2

Age of the Respondents

Age	**n**	**%**
Age 10- 12	10	2.9
Age 13-16	93	27.1
Age 17-19	223	65.0
Age above 19	17	5.0
Total	**343**	**100.0**

According to the results as presented in table 2, the age of the respondents was spread from 10 to 19 years and above. A similar result was found in the age of secondary school students in Ghana as reported. The study conducted by Markwei and Appiah (2016) in two locations of Accra (Nima and Maamobi) was involving 150 participants aging between 11 and 19 years of age. The only difference is that majority of the respondents, who were in the selected secondary schools were in the age bracket between 17 and 19 years old. The results confirmed the fact that in many locations, the age of secondary school students is the age bracket between 10 to 19 years old.

4.3.2 Gender Distribution of Respondents

The characteristic of gender was incorporated in this study for several reasons. It made the aspect of gender inclusion addressed. Gender is also a significant factor when analysing a behaviour. It offers more information about how various people may respond to events in life depending on their gender.

Gender Distribution of the Respondents

Table 3

Gender Distribution of the Respondents

Gender	n	%
Male	193	56.3
Female	150	43.7
Total	**343**	**100.0**

In table 3, the gender distribution is showing that there was a balance in the recruitment of respondents for the study. The gender factor was properly met in this study. The European Institute for Gender Equality (2016) asserts that "gender inclusion in research is a key factor in determining whether society is healthy". The study was gender inclusive.

Cluster Gender Distribution of Respondents

This demographic presentation concerning the breakdown of gender across the cluster was found important as it could assure the researcher of addressing the gender aspect at each cluster level. The table 4 shows the gender breakdown in each cluster.

Cluster Gender Breakdown of Respondents

Table 4

Gender Breakdown by Cluster

Gender Breakdown by Cluster	High Income		Middle Income		Low Income	
	n	%	n	%	n	%
Male	41	21.2	126	65.3	26	13.5
Female	98	65.3	25	16.7	27	18

The gender distribution for each cluster is shown in table 5. It demonstrates that the study included gender balance aspect. Gender is a concept that suggests that study findings represent both the biological and social aspects (The Research Council of Norway, 2014).

4.3.3 Cluster Distribution of Respondents

This study was covering a location which was divided into clusters. It was therefore adequate to capture this factor by presenting at least the statistic of respondents by the cluster to which they belonged. This demographic characteristic might help in understanding the way people adopt certain behaviour or react to life events due to different socio-economic situations.

Distribution of Respondents by Cluster

Table 5

Respondents by Cluster

Respondents by Cluster	n	%
High Income	139	40.5
Middle Income	151	44
Low Income	53	15.5
Total	**343**	**100.0**

In table 5, the results showed that the enrolled respondents were coming from various socio-economic backgrounds. It included respondents from high, middle and low income locations of Nairobi County. Socio-economic status is utilized in sociological research. The socio-economic status is an important tool in descriptive analysis. It has been regarded as the most potent and reliable factor in explaining differences between social groupings (Nagaraju, Mani & Reddy, 2019). It was important for the researcher to include respondents from different socio economic. It helped in understanding the effect of the mobile phone across the socio-economic locations.

4.3.4 Family Status Distribution of Respondents

This study was about young people who were normally supposed to be under their guardians. The family status of the respondents was then included in this study. The family status was captured as an important demographic characteristic, based on the fact that it can give light on the behaviour and habits of the respondents.

Respondents' Family Status

Table 6

Family Status of Respondents

Family Status of Respondents	n	%
My Parents	192	56
My Mother	77	22.4
My Father	32	9.3
My Extended Family	42	12.2
Total	**343**	**100.0**

From the information gathered in table 6, majority of the respondents 192 (56%) were living with both parents. 77 respondents (22.4%) declared to be under their mothers' care, 32 respondents (9.3%) were living under the care on their fathers alone whereas 42 participants (12.2%) were taken care of by their extended family members. The substantial influence of parenting style on adolescent development is clear. Adolescents raised in authoritative households consistently demonstrate higher protective and fewer risky behaviours than adolescents from non-authoritative families. There is also considerable evidence to show that

parenting styles and behaviours related to warmth, communication and disciplinary practices predict important mediators including academic achievement and psychosocial adjustment (Newman et al., 2008).

4.3.5 Religious Affiliation of Participants

Religion is a cultural element that aids individuals in giving and receiving meaning from life's occurrences. It was crucial to provide that demographic detail because it could be a significant determining factor in this study. The distribution of respondents by religious affiliation is seen in table 7.

Respondents Religious Affiliation

Table 7

Religious Affiliation

Religious Affiliation	**n**	**%**
Christian faith	296	86.3
Muslim	36	10.5
Other beliefs	4	1.2
None	7	2.0
Total	**343**	**100.0**

Religion is a cultural component which helps people to give and get meaning from life events. It was therefore important to include religion as a demographic characteristic as it could be a valuable determinant factor concerning the matter of this studied topic. According to Salgado (2014) religion offers a sense of purpose that other types of social support cannot provide. It can be helpful for people to move forward after traumatic events and to offer a source of hope to the ones who deal with their problems every day. Religious beliefs may even readjust the meaning of daily life problems for them to appear more manageable, increasing thus general levels of life satisfaction. Table 7 shows the distribution of respondents by religious affiliation.

4.3.6 Duration in Possession of a Mobile Phone

This demographic characteristic aimed at obtaining detail about the mobile phone ownership by the respondents. Adolescents' psychological health may be significantly impacted

by this element of mobile phone ownership. The table 4.7 presents the timeframe since when the person was in possession or in operating of a mobile.

Duration in Mobile Phone Ownership

Table 8

Duration in the mobile phone ownership

Duration in Mobile Phone Ownership	n	%
0-1 Year	59	17.2
2-3 Years	87	25.4
4-5 Years	79	23
6-7 Years	60	17.5
Above 7 Years	58	16.9
Total	**343**	**100.0**

In table 8, the results are showing that about 25% of the respondents were have been using a mobile phone for a period of 2 to 3 years. This was followed by a section of participants representing 23% who have been in possession of mobile phone for a period of 4 to 5 years. This result helped the researcher to understand that the matter under study was not strange to participants. The same situation was observed by another researcher when conducting a study among metropolitan secondary schools in Japan. Siddiqi et al. (2020) conducted a study which had involved 295 high school students between the ages of 15 and 19. According to the study, 98.6% of pupils had smartphones. Ninety-seven percent of high school pupils in metropolitan areas utilized smartphones, according to the results of another survey conducted by Tokyo Board in 2018.

The same result was observed in a study conducted in USA. In the United States, ownership of mobile phones begins early. My colleagues and I surveyed 2,100 children attending public schools in North Carolina in 2015. In that sample, which is likely to be representative of US adolescents, 48% of 11-year-olds told us they owned a mobile phone (Odgers, 2018).

4.4 Findings of the Study

The results were given in accordance with the four study objectives as well as the measurement of a few demographic parameters. The outcome of the tested hypothesis was equally given in this part.

4.4.1 The Influence of Duration in Mobile Phone Use and the Psychological Wellbeing

This is the research study's primary goal. The purpose was to determine how much time secondary school pupils spent using their cell phones. The findings in this part of the study were based on the analysis of the answers provided by secondary school students through questionnaire and the interview. The table 9 shows the amount of time spent by different respondents on a daily basis average while using their mobile phones.

Time Spent in the Use of Mobile Phone

Table 9

Time Spent in the Use of Mobile Phone

Time Spent in the Use of Mobile Phone	**n**	**%**
0-1 hour	95	27.7
2-3 hours	28	8.2
4-5 hours	119	34.7
6-7 hours	89	25.9
Above 7 hours	1	0.1
Total	**343**	**100.0**

The result in table 9 shows that the majority of the respondents (119) were spending between 4 and 5 hours daily in the use of mobile phone.

Table 10

Mean and Standard Deviation for the Time Spent

	Mean	N	Std. Deviation
0-1 hour	4.6424	94	.88536
2-3 hours	4.9107	28	1.01850
4-5 hours	4.3960	117	.90979
6-7 hours	4.6992	87	1.03837
Above 7 hours	4.7273	11	.86297
7	5.1667	1	.
Total	4.5983	338	.95319

The results in table 10 present the mean and the standard deviation of the inferential statistics of time and the psychological wellbeing of students. It was an indication that the factor time spent on the mobile phone had some influence of the psychological wellbeing of secondary school students.

In addition to the questionnaire, 10% of the participants, according to Mugenda & Mugenda (2003), were selected in order to collect qualitative data from them. The 10% represented 35 participants who were purposely selected. The main themes developed were related to the objectives of the study. The items of the interview were evolving around the themes of time spent, the reason for using the mobile phone, the most liked social media, and the strategies for mobile phone management. When analysing the responses of the 35 interviewees in relation to the first theme, it appeared that the majority used their mobile for 3 to 4 hours on a daily basis. This was an answer from one of the interviewees:

> *I do spend around 3 hours on my phone almost every day. But over the weekend, I can go up to more than 5 hours, chatting with friends, watching movies and others things (St5, Female Respondent, May 2022).*

The finding related to the time spent by secondary school students was a bit different from of a study conducted in Delhi (India). In Nairobi, the results of quantitative and qualitative data are showing that the highest number of secondary school students (34.7%) spent between 4 and 5 hours in the use of their mobile phone. In Delhi, more than 65% of students used a smartphone to access the internet on average 5 to 8 hours every day, according to Jena and

Shekhar (2020). According to this study, a sizeable portion of secondary school pupils were using their mobile phones for up to five hours per day. Nganga and Bundi's (2018) study in Kiambu County produced similar findings. The results show that social media has grown quite popular. According to the majority of respondents (51.9%), they spend between three and four hours, between one and two hours, between five and six hours, and over six hours each day just using social media. Because of this, more than 90% of the participants admitted to be using social media more than once a day.

The result was similar to the finding of a study conducted in Asia. In South Korea, Cha and Seo (2018) conducted a study involving 1.824 students from the middle schools as participants. They arrived at this finding. It was reported that 40% of adolescents and adults use smartphones for more than 4 hours a day to make calls and send messages. But the results were in contrast with the findings of a study carried out in Benin state. According to Kennedy (2020) 56% of 575 participants were spending between 5 and 8 hours daily using the social media network.

The result was in contrast with the finding of a study conducted in Hong Kong by Chueng, Lai and Yip (2022). The study had involved 650 participants. It was reported that early adolescents used their smartphones for one to two hours per day, 31.4% used their smartphones for less than one hour per day, 17.5% used their smartphones for three to four hours per day, and 7.4% used their smartphones for more than four hours per day.

Time Spent on the Mobile Phone and the Psychological Wellbeing

Table 11

Time Spent on the Mobile Phone and the Psychological Wellbeing

		Wellbeing	**Time I spend daily in the use of a mobile phone**
Wellbeing	Pearson Correlation	1	-.008
	Sig. (2-tailed)		.885
	N	338	338
Time I spend daily in the use of a mobile phone	Pearson Correlation	-.008	1
	Sig. (2-tailed)	.885	
	N	338	343

The result in table 11 indicates that the time spent in the use of mobile phone is influencing negatively the wellbeing of the participants as seen in the Pearson' correlation value (-.008). This result is similar to the findings of a study carried out in Asia. In a study conducted in Villupuram Taluk of Tamilnadu State, in India, Anboucarassy and Begum (2014) arrived at a similar finding. They reported that the higher secondary school student's mental health was affected by the use of mobile phones. This result is contrasting with the findings of a study conducted by Rodriguez and Merryman (2021) involving a sample of 345 participants. the report stated that there was no significant correlation was found between number of hours' children and adolescents spend using electronic devices and their well-being: problematic behaviours, GPA, hours of sleep, diagnoses, peer support, and health problems. A Pearson correlation coefficient found no relationship between number of hours of electronic device use and number of problematic behaviours, r = -.22, n = 50, p = .12. The duration in the mobile phone use was identified as influencing negatively the psychological wellbeing of school students.

4.4.2 Motivating Factors that Lead to Mobile Phone Dependency

The study's second goal was to achieve this. It sought to identify the driving forces behind the frequent use of mobile phones. A Likert scale survey with seven response options was given to respondents: strongly agree =1; somewhat agree =2; a little agree =3; never agree or disagree =4; a little disagree =5; somewhat disagree =6; and strongly disagree =7.

I Use the Mobile Phone for Communication

Table 12

I Use the Mobile Phone for Communication

Use of Mobile Phone for Communication	n	%
Strongly agree	150	43.7
Somewhat agree	48	14
A little agree	84	24.5
A little disagree	1	0.3
Somewhat disagree	11	3.2
Strongly disagree	49	14.3
Total	**343**	**100.0**

The results indicate that the majority of the respondents (150) were using their mobile phone for the purpose of communication. From the 35 respondents involved in the interview, 29 participants acknowledged using their mobile phone for communication. In the interview, 1 respondent provided this response:

> *I use the mobile phone to remain in touch with my mother and other siblings who are away from home. The mobile phone helps me to communicate daily with my mother and give her the news about my life (St.7, Male Respondent, May 2022).*

According to the results, a big number of respondents (82.2%) acknowledged that they have been communicating via mobile device. This is reflecting both in quantitative as well as in qualitative data analyses. The study's findings were comparable to those of a study conducted in Malaysia. According to the study's findings, smartphone users most frequently use them to make and send phone calls and text messages (Lee et al., 2021). The findings of the research did not support Taleb et alassertion' (2017) that watching news was the primary goal of mobile phone use. According to statistics, almost 75% of students use at least four social media platforms daily for news and social networking.

I use the Mobile Phone for Entertainment

Table 13

Use of Mobile for Entertainment

Use of Mobile Phone for Entertainment	**n**	**%**
Strongly agree	113	32.9
Somewhat agree	58	16.9
A little agree	96	28
Somewhat disagree	34	9.9
Strongly disagree	42	12.2
Total	**343**	**100.0**

The majority of the respondents (32.9%) as shown in table 12 were using their mobile phone for entertainment. The 35 respondents who participated in the interview provided their opinion in the use of mobile phone for entertainment. The big number of participants (113)

acknowledged to use their mobile phone for entertainment. In the interview, one respondent stated like this:

> *I use my mobile phone for entertainment. Sometimes in weekends life is boring, then the best thing is to use the mobile phone for playing music. As the music is playing, I also dance (St10, Female Respondent, May 2022).*

The result showed that the entertainment factor was among the priority of young people for using the mobile phone. This results were transpiring in both the quantitative and qualitative data. The outcome is comparable to that of a study carried out in Nigeria by Akintola (2021). According to the study, young people and teenagers place a high value on social media. It is now a top priority for them. They like spending time on social media platforms and disregard all other obligations, such as those to their families, teams, and schools (Lee et al., 2021). The result was in contrast with the findings of a longitudinal study. According to a review of 36 studies published between 2002 and 2017 indicates that teens use digital communication to enhance relationships by sharing intimacy, displaying affection and arranging meet-ups and activities (Odgers, 2018).

I use the Mobile Phone for Studying

Table 14

Use of Mobile Phone for Studying

Use of Mobile Phone for Studying	**n**	**%**
Strongly agree	143	39.1
Somewhat agree	51	14.9
A little agree	87	25.4
Somewhat disagree	28	8.2
Strongly disagree	43	12.5
Total	**343**	**100.0**

The results of table 14 were showing that a big percentage (39.1%) of the respondents using their mobile phone for academic activities. Those who participated in the interview provided their views on the statement concerning the use of mobile phone for studying. A group

of 26 respondents out of the 35 respondents mentioned that they did make use of their mobile phone for studying. In the interview, a respondent reported:

> *I use sometimes my phone for studying. I can use it as a dictionary for checking meaning of words. When I miss class, I can just take a picture of my friend' notes and read from my phone later (St12, Male Respondent, May 2022).*

The findings of this study are close to the finding of another study conducted by O'Bannon et al. (2017). More students than teachers were supportive of using mobile phones in the classroom. All the students agreed that mobile phones support student learning. But these findings are in contrast with the research done by Gomez et al. (2020) who found out that many young people do not use their mobile phones for educational purposes. The number of mobile phones surpassed the population of the planet in 2018. Without a doubt, mobile phones have become the tool of reference in our social life, as well as in our work and leisure, but in educational centers, they continue to be used inefficiently or are declared off limits to some classrooms. According to Smale, Hutcheson and Russo (2020), recent studies suggested that the presence of cell phones and related technologies in classrooms could detract from students' academic performances while contributing to higher rates of academic dishonesty and cyberbullying.

The results were different from the finding of a study conducted in Chine by Meng et al. (2020). They stated that most teenagers use smartphones in their daily lives to communicate with each other (e.g., call, send messages, e-mails) or to have fun (e.g., watch videos and play games) but rarely use smartphone to engage in academic activities (e.g., finding learning materials).

I use the Mobile Phone for Making Friends

Table 15

Use of the Mobile Phone for Making Friends

Use of Mobile Phone for Making Friends	**n**	**%**
Strongly agree	79	23
Somewhat agree	66	19.2
A little agree	65	19
A little disagree	1	0.3
Somewhat disagree	73	21.3
Strongly disagree	59	17.2
Total	**343**	**100.0**

The table 15 provided the findings related to the question of the use of mobile phone for making friends. A group of 79 respondents (23%) acknowledged to be using the mobile phone for making friends. The views of those recruited for the interview were not different from what resulted from the questionnaire. The majority of the interviewees also stated that they were using the mobile phone for searching for friends and maintaining the friendly relationship. In the interview, a respondent reacted in this way:

> *Many of my colleagues tell me that they had found friends from the internet. I started using also my phone for trying to get some friends. And you can see receive many demands of friendship (St14, Female Respondent, May 2022).*

The findings of this study are in line with the result of a study conducted by Vaidya and Vaidya (2016) who found out that the desire to get connected is a very important factor in mobile phone usage which was reflected in preference for social networking sights. According to Aggor et al. (2011), in most of these senior high school institutions, the usage of mobile phones is banned mainly because the Ghana Education Service (GES) is of the view that most students in these institutions would use their mobile devices for recreational activities such as playing games, listening to music or just building up their social media presence.

I use the Mobile Phone for Other Needs

Table 16

Use of the Mobile Phone for Other Needs

Use of Mobile Phone for Other Needs	**n**	**%**
Strongly agree	74	21.6
Somewhat agree	83	24.2
A little agree	80	23.3
Never agree or disagree	1	0.3
Somewhat disagree	43	12.5
Strongly disagree	62	18.1
Total	**343**	**100.0**

The respondents were asked to confirm if they used their mobile phone for other reasons. The table 16 provides answers from the respondents. In addition, 27 respondents who participated in the interview declared using their mobile phones for other needs while 6

respondents did not have other use of their mobile phones apart those above mentioned. In the interview, a male respondent said:

> *Yes, I use the mobile phone for communication and entertainment. But I also use my phone for business. I sell internet bundles to people. It helps me to get some money for contributing to my living (St19, Male Respondent, May 2022).*

The results of the study are supported by Akintola (2021) who found out that respondents expose themselves to social media information to enhance their lives in different ways such as for news, friendship, business and academic purposes. The results of this study do not support the findings of the study conducted by Bukowa (2017) who noted that young people are more interested in communicating information bordering entertainment and sports (for males) and fashion for females.

The study findings on the motivation of using the mobile phone by secondary school students showed that the non- academic motivations appeared in first positions. These were the motivations of communication and entertainment. According to Jena and Shekhar (2020), their study revealed that the students have become more dependent on online sources as compared to the physical sources and study materials, but their purpose of using smartphones, surfing and browsing have been found not surprising, as most of them are spending maximum time on non-academic purpose which includes playing online games, watching videos and spending time on social media. The most significant part of the study therefore reflects that there exists an inverse relationship between the frequency of smartphone use by the teenage students in the region of Delhi and their academic scores.

The findings of this study are in contrast with the result conducted among secondary school students studying in high schools in Istanbul. The non- academic reasons were among the main purposes of using the mobile phone. According to Tezci and Icen (2017), the academic motivation is the first reason for students in using their mobile phone. The highest mean (mean=4.00, SD=.73) concerning the students' purposes of social media usage was observed to be on the educational purpose. This was followed by the purpose of entertainment (mean=3.73, SD=.78).

In a study conducted in Greece, the findings showed a trend in the use of mobile phone for studies. In summary, majority of the pupils believe that the mobile devices are an incentive/motivation for learning, mainly because these help in searching for information, they are interesting, they help pupils in understanding the concepts and in completing the school assignments. Pupils' positive opinions seem to be linked to their positive attitudes towards mobile devices (Nikolopoulou, 2019).

4.4.3 Mobile Phone Applications and their Influence on the Psychological Wellbeing of secondary school students

The aim of the third objective was to identify the most popular mobile phone applications accessed by secondary school students in Nairobi county. The respondents were asked to give their opinion on each of the six suggested applications namely Facebook, WhatsApp, Instagram, TikTok, You Tube, and Google. The answer's choice was on a Likert scale of 5 suggested responses, starting with Liked (1), Much liked (2), Very much liked (3), Neutral (4), and Not liked (5). The table 16 provides the different answers from secondary school students with regard to different suggested applications.

The Result for the Preference in the Use of Social Media

Table 17

Preference in the Use of Social Media

Social Media		Liked	Much liked	Very much liked	Neutral	Not liked	
Facebook	n	81	39	49	36	138	343
	%	23.6	11.4	14.3	10.5	40.2	100
WhatsApp	n	45	87	129	40	42	343
	%	13.1	25.4	37.6	11.7	12.2	100
Instagram	n	56	71	140	21	55	343
	%	16.3	20.7	40.8	6.1	16	100
TikTok	n	58	54	142	29	60	343
	%	16.9	15.7	41.4	8.5	17.5	100
You Tube	n	58	70	128	49	38	343
	%	16.9	20.4	37.3	14.3	11.1	100
Google	n	70	69	101	57	46	343
	%	20.4	20.1	29.4	16.6	13.4	100

The result presented in table 17 shows that the most preferred social media was the TikTok appreciated by 142 participants (41.4%).

In the interview exercise, 29 respondents agreed to like the Tiktok application while 6 respondents were in disliked the application. The rate of response in the interview was similar to the answer rate from the questionnaire. In the interview, a respondent said this:

> *I like Tiktok. It has very funny stories. When I am tired or when I want to laugh, I look for Tiktok. It is a nice entertaining application. It helps me to be in a good mood (St 24, Male Respondent, May 2022).*

The Instagram application came second in the choice of 140 secondary school students (40,8 %). The interview was conducted for 35 students. It had provided the result almost similar

to the one from questionnaire. They agreed on the fact that they liked the application. But 8 respondents did not like the application. For those who liked the application, one participant said:

> *Instagram is a very good application. When I use the Instagram, I am able to watch the picture of my role models. I follow what they do, I can see the style of clothing. With Instagram, I come indirectly in touch with celebrities. I copy also the way celebrities are wearing (St25, Female Respondent, May 2022).*

In third position of preference, 129 secondary school students opted for the WhatsApp application (37,6%). Some 27 respondents from the interview acknowledged that they liked and used the WhatsApp application. 8 respondents did not like the application. In the interview, female respondent provided this answer:

> *I like WhatsApp very much. When I have enough bundle, I do call my friends on video, even we can make a group video. We talk, we laugh. We are able to see each other. That makes us to feel good (St35, Female Respondent, May 2022).*

You Tube application was rated in fourth position in terms of preference (37,3 %). The result from the interview stated that 28 respondents agreed to like the application. Other 7 respondents did not like the application. In the interview, a male respondent came up with this response:

> *I consult YouTube for educational purposes. I watch geographical materials for my study. The only problem is that it consumes a lot bundles when you are watching. It is expensive. But I like it very much as it has a lot educational materials (St40, Male Respondent, May 2022).*

The Google application was equally liked by 101 participants, but it came in fifth position (29,4 %). In the interview, 27 respondents from the 35 interviewed stated that they liked the Google application but after other applications such as TikTok, Instagram, You Tube and WhatsApp. In the interview, a female respondent reported this:

> *Google is a very good application. I use it almost every day. When the teacher gives us a homework, I go to Google to search for documents to read or for answers. It has many things. With Google you are able to look for everything you want. As a student, it is a good application (St52, Female Respondent, May 2022).*

Facebook application appeared in last position with 49 respondents (14,3%) in favor. The interviewed secondary school students acknowledged that Facebook application is losing ground among young people. In the interview, a male respondent provided this statement:

I have a Facebook account. But I realize that all the time I receive messages from other people I do not know. It gives me a lot work of reading those messages or watching the pictures they send. It is just stressing me for nothing. Sometimes I feel like not writing comment to matter which are not mine (St55, Male Respondent, May 2022).

The result of this research found an echo in another study which was conducted in China. Both studies arrived at a similar result. Tiktok is the most popular mobile application in Nairobi and in China. Adnan, Syahirah, and Noornisa (2021) estimate that around 45 million individuals downloaded TikTok throughout the three-month period internationally. The program is now the most widely used app, surpassing Facebook and WhatsApp. One of the most popular social networking sites for young people to share their 3 to 60-second-long movies, TikTok was the most downloaded app in July 2020. TikTok was among the most widely used applications in the world as of 2021 among adolescents.

This outcome was in contrast to a study that was conducted in Kajiado county. The Facebook application was rated as the preferred social media by secondary school students. Facebook is a social media site that lets people communicate by posting and exchanging feelings about particular concepts (Abadali et al., 2021).

The result of this study on the mobile phone applications used by secondary school students was indicating a new trend in the social media consumption. The study findings put Tiktok as the most visited application, followed by Instagram, WhatsApp, You Tube, Google and Facebook. It was quite interesting to observe the shift in interest from Facebook to other applications such as Tiktok and Instagram. This finding was greatly contrasting with other studies such as the one conducted in Turkey by Gedik and Cosar (2020). The most popular social media, according to the participants, was Facebook. Students can communicate with their loved ones and families thanks to it. High school students made up the bulk of individuals who used Facebook. In general, participants were utilizing Instagram for amusement. Participants used YouTube for entertainment and for home assignments related to their studies. The youth in Kenya are fond of Facebook, Snapchat, TikTok, and Instagram, according to Nyangesa et al (2020). However, the popularity of Snapchat, TikTok, and Pinterest among users between the ages of 14 and 20 is shifting.

4.4.4 Strategies in Place in the Management of Mobile Phone Dependency

In line of identifying some strategies concerning the mobile phone use, secondary school students were asked to give their opinion in regard to that matter. To the satisfaction of the respondents, three statements regarding the education of students in high schools about the mobile phones use, the involvement of parents in observing students' use of mobile phones, and the option for the school administration to forbid the phones usage were proposed. The possibility of picking any convenient response from a Likert scale questionnaire was given to participants.

Strategies in Managing the Mobile Phone Use among Secondary School Students

Table 18

Strategies in Managing the Mobile Phone Use among Secondary School Students.

		Strongly agree	**Somewhat agree**	**A little agree**	**Never agree or disagree**	**Somewhat disagree**	**Strongly disagree**
To increase the sensitization of secondary school students	n	102	101	1	90	24	25
	%	29.7	29.4	0.3	26.2	7	7.3
Parents have to monitor the use of the mobile phone by their children	n	86	66	2	46	69	74
	%	25.1	19.2	0.6	13.4	20.1	21.6
School Administrations have to ban the Use of the Mobile Phone for Secondary School Students	N	104	85	53	1	44	56
	%	30.3	24.8	15.5	0.3	12.8	16.3

Students were asked to give their views on the sensitization as a strategy for the management of mobile phone by secondary school students. A group of 102 participants (29.7%) out of 343 supported the idea of increasing sensitisation related to mobile phone use. On the second question, 86 respondents (25.1%) out of 343 were of opinion of parents to monitor the

mobile phones of their children. On the third question, 104 participants (30.3%) out of 343 respondents, were in agreement with the idea of banning mobile phone during school hours.

In this section of the research, some key informants were consulted in order to get their views the topic under study. The key informants were some of the people who are taking academically care of the secondary school students. The key informants were able to provide their opinions on the mobile phone behaviours. These viewpoints could serve as a reference for creating appropriate mobile phone usage policies for secondary school pupils. When asked about what they thought of the mobile phone use by secondary school students and which strategy they could suggest, some came with these contributions. In the interview, one respondent said:

> *Mobile phone is a modern and multipurpose tool. But we need to separate things. In school, and during class hours, there is no specific place or room for the use of mobile phone, unless its use is related to a subject. Students can use the mobile after class. Complete ban of the mobile phone is not a practical as it is just a delay in addressing the issue of mobile phone. If secondary school students are not allowed to use the mobile phone now, then the problem is not solved and could resurface later when these students would have finished with secondary school education. There is need of to teach them about the side effect of using the mobile phone especially the access of some social media (KI7, May 2022).*

Another key informant expressed himself in this way:

> *I don't see the mobile phone as a problem. The problem is in the using of mobile phone. The secondary school students are still young people. They need guidance in the use of the mobile phone. In this guidance, we have to enlighten the secondary school students in the complex aspect of a mobile phone on what they can see or hear from their mobile phone. It is cardinal to monitor the use of the mobile phone by limiting the time for using it. Parents and Educators must join hands in fulfilling this task. There is need of limiting access to some social media by blocking certain applications from secondary school students' mobile phones. We can also sell to secondary school students the good face of the mobile phone. The mobile phone is not only for entertainment, but can be used for studying and achieving other academic tasks (KI7, May 2022).*

The research creates awareness among psychologists, academicians, and researchers that excess use of mobile phone can increase issues related to mental health among students. Thus, it is recommended that schools authorities should educate students regarding the negative consequences of mobile phones. Moreover, students should be provided with services in schools

such as counselling centres in order to identify early symptoms of mental health issues (Ali, Shah & Qasim, 2021).

This section of the study focused on mobile phone usage strategies. Secondary school students had the chance to express their opinions on issues such as mobile phone sensitization, the consequences of parental surveillance, and the prohibition of mobile phone use by school administrations. Selected key informants were able to express their thoughts on the problem of secondary school pupils using mobile phones and offered potential solutions.

4.4.5 Hypothesis Testing

Table 19

ANOVA Test for Motivating Factors for the Mobile Phone Use and the Psychological Wellbeing.

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	148.718	73	2.037	1.915	.000
Within Groups	280.784	264	1.064		
Total	**429.502**	**337**			

Table 20

Details for ANOVA Test on Groupings

		Sum of Squares	df	Mean Square	F	Sig.
I use the mobile phone for communication	Between Groups	610.153	73	8.358	2.511	.000
	Within Groups	878.734	264	3.329		
	Total	1488.888	337			
I use the mobile phone for entertainment	Between Groups	557.920	73	7.643	2.228	.000
	Within Groups	905.501	264	3.430		
	Total	1463.420	337			
I use the mobile phone for studying	Between Groups	520.118	73	7.125	1.922	.000
	Within Groups	978.509	264	3.706		
	Total	1498.627	337			
I use the mobile phone for making friends	Between Groups	546.768	73	7.490	1.584	.005
	Within Groups	1248.360	264	4.729		
	Total	1795.127	337			
I use the mobile phone for other needs	Between Groups	394.067	73	5.398	1.122	.256
	Within Groups	1270.584	264	4.813		
	Total	1664.651	337			

Table 19 and table 20 present the results of the hypothesis testing with ANOVA. The findings showed that the significance is 0.000. In this case, the significance value is inferior to the P-value (0.000 > 0.05). The results indicated that the null hypothesis had be rejected in favour of the alternative hypothesis. In this study, the results of the ANOVA test were stipulating that there was a significant relationship between the use of mobile phones and the psychological wellbeing of students in selected secondary school in Nairobi County.

Table 21

Result of the Pearson Correlation Between Time Spent and the Psychological Wellbeing

		Time I spend daily in the use of a mobile phone
Time I spend daily in the use of a mobile phone	Pearson Correlation	1
	Sig. (2-tailed)	
Wellbeing	Pearson Correlation	-.008
	Sig. (2-tailed)	.885
Autonomy	Pearson Correlation	.157**
	Sig. (2-tailed)	.004
Mastery	Pearson Correlation	-.102
	Sig. (2-tailed)	.060
Growth	Pearson Correlation	.001
	Sig. (2-tailed)	.985
Relations	Pearson Correlation	-.040
	Sig. (2-tailed)	.457
Purpose	Pearson Correlation	-.034
	Sig. (2-tailed)	.528
Acceptance	Pearson Correlation	.001
	Sig. (2-tailed)	.980

The results in table 21 on wellbeing are showing that it has the P. value of 0.885 which is a strong value, thought the direction is negative of – 0.008 as indicated by the Pearson correlation. Ii is an indication that the use of mobile phone interferes negatively on the wellbeing of secondary school students.

Interpretation of the Psychological Wellbeing' Results

Table 22

Interpretation of the Psychological Wellbeing' Result

	Mean	Std. Deviation	N
Time I spend daily in the use of a mobile phone	2.70	1.240	343
Wellbeing	4.5983	.95319	338
Autonomy	4.6331	1.23721	338
Environmental Mastery	4.1953	1.36621	343
Personal Growth	5.0894	2.00934	343
Positive Relations	4.1293	1.36553	343
Purpose in Life	4.7250	1.42628	343
Self- Acceptance	4.9116	1.54622	343

The results in table 22 presents the mean and standard deviation scores for each of the dimension of psychological wellbeing in general as well as for the 6 other dimensions. The results indicate that the 3 higher mean scores were associated with the dimension of personal growth (5.0894) followed by the self-acceptance (4.9116) and the purpose in life (4.7250). On the other hand, the 3 lowest mean scores were found in wellbeing (0.95319), followed by autonomy (1.23721) and environmental mastery (1.36621). The Mean and the Standard Deviation are key elements in interpreting the level of psychological wellbeing. High well-being is defined as scores that are 1.5 standard deviations above the mean, whereas low well-being is defined as scores that are 1.5 standard deviations below the mean (Ryff & Keyes, 1995).

The inferential statistics correlation produced a value of 0.885 as shown in table 19, Row 2. It is evident that the time spent in the use of mobile phones has an influence on the psychological wellbeing of secondary school students. Ali et al. (2021) arrived at similar findings while conducting a study Peshawar (Pakistan). There were 214 participants in total, 50% of whom were girls and 50% boys, ranging in age from 12 to 20, with an average age of (17.25 + 10.3). In that study, simple linear regression and a t-test for differences were used for further analysis. Simple linear regression analysis showing the role of mobile phone usage in predicting mental health problems among secondary school students (N = 214). The table analysis results showed that mobile phone usage was significantly positive in predicting mental

health problems among secondary school students and accounts 15 % (R=.15) of variance in predicting.

Psychological well-being is a multi-faceted concept composed of six different intra-personal characteristics that describe the fully functional individual (Ryff, 1989). These factors are: positive relationships with others, self-acceptance, environmental mastery, autonomy, purpose in life and personal growth (Garcia et al., 2014). When talking of psychological wellbeing, six factors have to come to mind, namely the Autonomy, the Environmental mastery, the Personal growth, the positive relations with others, the Purpose in life and the Self-acceptance. The statistical analysis was run across these six components of wellbeing and the results were as follows. The highest strong positive correlation was found between the time spent on the use of mobile phones and the aspect of personal growth (0.985). In second position there was self-acceptance (0.980), third was environmental mastery (0.60), followed by the purpose in life (0.528). In fifth position, there was the positive relations with others (0.457), and finally the least, was the autonomy.

The findings of the study were similar to the results of the study conducted in Canada about the relationship between the use of smartphone and the psychological wellbeing. According to Brodersen, Hammami and Katapally (2022) among the 437 participants (13–21 years old), 71.2% reported high total smartphones use during a typical week (5 weekdays and 2 weekend days). High weekday and high weekly total smartphone use were associated with an almost two times higher risk of screening positive for anxiety, while high weekend gaming and high total smartphone use were associated with an almost three times higher risk of suicide ideation. Moreover, high weekend total smartphone use was also associated with an almost three times higher risk of poor self-rated mental health.

The findings of this study in relation to the psychological wellbeing in terms of self-acceptance concurred with findings from other studies such as the one conducted by Gallagher (2017) as cited by Abadali, Asatsa and Ntaragwe (2021). A research on the satisfaction rates of adolescent girls after being exposed to ultra-thin models and average sized models came to the conclusion that viewing these images negatively correlated with self-esteem and body satisfaction.

The findings of a study conducted in Chiang Mai in Thailand by Tangmunkongvorakul et al. (2019) were describing the similar effects of the excessive use of mobile phones on the psychological wellbeing. The study included several items on different aspects of social relationships: having supportive and rewarding relationships; contributing to other's happiness; and being respected by others. It also includes items which cover a sense of purpose and meaning in one's life; being engaged and interested in one's daily activities; competence; optimism and self-respect. Based on already existing research, it is possible that smartphone use could interfere with some of these facets of human functioning. It was demonstrated that smartphone use, tends to reduce the quality of face-to-face interaction. They found that the positive association between "Time spent with friends" and "Satisfaction with friends" was significantly less strong among individuals who used smartphones. Therefore, individuals who use smartphones excessively, because of their reduced amounts of face-to-face interaction are likely to have less feelingsand interest in their social relationships that are supportive and rewarding.

The findings of the study were in line with the results of a study conducted in China by Chueng et al. (2022). The results showed that the average daily time spent using smartphones was significantly negatively associated with two scales in the physical domain and four scales in the mental domain of health-related quality of life of early adolescents, whereas the average daily time spent using computers was significantly negatively associated with two scales in the mental domain ($p < 0.05$). Therefore, early adolescents who spent more time using smartphones and computers have significantly poorer outcomes in the physical and mental domains of their health-related quality of life.

The time spent on the use of the mobile phones has a positive correlation with the psychological wellbeing of secondary school students. According to Munderia and Singh (2018), the results may suggest that dependence on mobile phone for various purposes may cause a detrimental impact on managing daily life activities, which further may lead to other psycho-social problems of depression, anxiety and social isolation in real life setting.

According to the results of table 21, all the standard deviation values are 1.5 below the mean value. It was a strong indication that mobile phone use is affecting negatively the wellbeing and its 6 dimensions.

This finding is similar to the findings of Zulkefly and Baharudin (2009) in their research conducted in Malaysia. The correlational analysis computed revealed that problematic phone use score was significantly ($r= 0.14$, $p < 0.01$) related to psychological health. This finding tends to suggest that the more problematic the students were regarding their phone use, the more they would be psychologically disturbed. This may be due to their uncontrollable and unhealthy use of their mobile phones. Adolescents who spend more time on their mobile phone were also more vulnerable to psychological disturbances.

It was reported not surprisingly that problematic smartphone users had a significantly higher percentage of poor self-perceived health and feeling unsatisfied with exercise participation than average smartphone users. This indicates the negative effects of smartphone use on health and exercise participation. Some researchers have reported that high-risk smartphone users engaged in limited physical activity (Chao et al., 2022).

Model Summary for Regression Analysis for Social Medial Applications and Wellbeing

Table 23

Regression Analysis for Social Medial Applications and Wellbeing

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.410[a]	.168	.153	.87727

Predictors: (Constant), I use Google, I use Tik Tok social media, I use Facebook social media, I use Whatsapp social media, I use YouTube social media, I use Instagram social media.

The results in table 23 are indicating that the social media applications considered in this study are responsible of 16.8% (R Square= 0.168) in any variation of the wellbeing. According to Dhakal (2018), the R Square (R^2) also called the coefficient of determination is the proportion of variance in the dependent variable that can be explained by the independent variable.

Results of Standardized Coefficients Beta

Table 24

Results of Standardized Coefficients Beta

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.015	.209		23.956	.000
	I use Facebook social media	.139	.030	.238	4.628	.000
	I use WhatsApp social media	-.109	.047	-.134	-2.329	.020
	I use Instagram social media	.095	.044	.124	2.140	.033
	I use Tik Tok social media	-.039	.042	-.052	-.923	.356
	I use YouTube social media	-.162	.044	-.204	-3.646	.000
	I use Google	-.095	.038	-.130	-2.499	.013

a. Dependent Variable: Wellbeing

The results in table 24 are focusing on the column of standardized coefficients Beta which is showing 4 negative values out of the 6 measured. According to Dhakal (2018) the Beta weight measure how much the outcome variable increases when the predictor variable is increased by one standard deviation assuming other variables in the model are held constant. In the case under study, whenever the use of social media increased, the wellbeing decreased.

The inferential statistics produced in table 24 were indicating that the time spent in the use of mobile phone has a negative influence on the psychological wellbeing of secondary school students. Ali et al. (2021) arrived at a similar finding while conducting a study Peshawar (Pakistan). There were 214 participants in total, 50 % of whom were girls and 50% of whom were boys, ranging in age from 12 to 20, with an average age of (17.25 + 10.3). In that study, using a simple linear regression analysis, 214 students' use of mobile phones was shown to be a predictor of mental health issues. The results were showing that mobile phone use considerably increases the likelihood that secondary school pupils will experience mental health issues and accounts for 15% (R=.15) of the variance in predicting these issues. Six various intrapersonal

characteristics make up the multifaceted idea of psychological well-being, which describes the completely functioning person (Ryff, 1989). The presentation of these elements includes interpersonal harmony, acceptance of oneself, environmental mastery, independence, life purpose, and personal development (Garcia et al., 2014). A study conducted in India by Anboucarassy and Begum (2014) and involving 240 students arrived at the same findings. It concluded that the higher secondary school student's mental health is affected by the use of mobile phones.

Excessive cell phone use can have a negative impact on all aspects of a student's life. The purpose of this study was to see how mobile phone usage affects mental health issues in secondary school students. Excessive mobile phone use has been suggested as a predictor of mental health issues in secondary school students. Previous research has looked into the link between cell phone use and mental health issues. They discovered that excessive use of mobile phones is linked to an increase in mental health issues among secondary school students (Ali et al., 2021).

The result of the study is supported by the findings of a study conducted in England. According to Reilly et al. (2018), their findings demonstrated that participants felt that social media directly causes ill-mental health such as depression and suicidal ideation, was addictive and exposed people to behaviours that impacted negatively on their emotional wellbeing, such as cyberbullying. Although some of the adolescents did draw on their own personal narratives, most of them framed their negative perspectives in anecdotal or generalised ways.

Abadali, Asatsa, and Ntaragwe (2017) mentioned a study by Gallagher that was conducted and found to be marching with the findings of this study in terms of psychological wellness in terms of self-acceptance (2021). Adolescent girls who were exposed to ultra-thin models were studied to determine their satisfaction levels. The study found that viewing these photos negatively linked with both body satisfaction and self-esteem.

Tangmunkongvorakul et al (2019) study in Chiang Mai, Thailand, found comparable consequences of excessive mobile phone use on psychological wellness. Numerous items on various facets of social interactions, including the existence of supportive ties among others, were included in the study. According to results from prior research, it was plausible that using a

smartphone could affect some of these aspects of how people perform. It has been shown that using a smartphone tends to make in-person social engagement less enjoyable. They discovered that smartphone users had a much weaker positive correlation between "Time spent with friends" and "Satisfaction with friends. Due to their decreased quantities of in-person engagement, those who use smartphones extensively are therefore more prone to lack emotionally supportive social interactions.

The amount of time secondary school pupils spends using their mobile devices is positively correlated with their psychological health. According to Munderia and Singh (2018), the findings indicate that relying too heavily on a mobile device for a variety of reasons can make it difficult to manage everyday activities. Additionally, this circumstance may trigger other psycho-social problems, like anxiety and despair.

The findings of the study were in disagreement with the results of a study conducted in the America. It stated that some participants were developing positive feelings after the use of social media. However, in a study conducted on United States youth aged 13–17 years old, 45% of respondents indicated they did not believe that social media platforms had any impact on their health; while 31% reported a positive impact for reasons mainly associated with the ability to connect with friends/family. Not all smartphone usage necessarily has poor impacts on health. Ecological momentary interventions that are delivered through smartphones have become important mobile health behavioural modification tools. An ecological momentary is an intervention or a treatment that targets mental or physical health behaviours and can be deployed through smartphones to individuals in real time. Studies have shown that daily interactions using smartphone technology, to engage with participants, can have positive impacts on wellbeing and physical health. This indicates that future screen time behaviour guidelines should develop smartphone specific recommendations that take into consideration both positive and negative uses of these universal devices (Sohn et al., 2019).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the Study

The general purpose of this study was to assess the existing correlation between the mobile phone dependency and the psychological wellbeing of secondary school students. The study adopted four specific objectives and used a convergent parallel mixed method. Pearson's Product Moment Correlation Coefficients was used and run through the Statistical Package for Social Sciences (SPSS) for analysis of quantitative data. The qualitative data were analyzed through thematic analysis and presented in forms of narratives.

The study's main goal was to determine whether there was a correlation between secondary school students' mobile phone dependence and their psychological well-being. The study employed a mixed method. For the study of quantitative data, the inferential statistics were run through the SPSS. Thematic analysis was used to analyze the qualitative data, which were then presented as narratives.

5.2 Summary of the Findings

The preliminary finding for this study showed that all the 343 participants (100%) had a mobile phone. Some respondents were in possession of a mobile phone for more than 5 hours. The study included male and female participants. most of the participants were in the age bracket between 17 and 19 years of age. period or duration in possession of the mobile phone.

5.2.1 Influence of Time Spent in the Use of Mobile Phone

It was found that a good amount of time is spent in the access to social media. The highest number of participants (119) representing 34.7% were spending up to 5 hours daily in the use of mobile phone. 95 participants (27.7%) stated that they were spending up to 1 hour daily in the use of the mobile phone. Another section of 89 participants (25.9%) acknowledged that they were spending up to 7 hours daily in the use of their mobile phone. A group of 28 respondents (8.2%) and another group of 11 respondents (3.2%) used up to 2 hours and above 7 hours respectively. The finding of the study displayed the amount of time spent by secondary school

students on daily basis. The Pearson correlation analysis was indicating a negative direction for the relationship between time spent and the psychological wellbeing. It meant that the time spent in the use of mobile phone was affecting negatively the psychological wellbeing of secondary school students.

5.2.2 Motivating Factors that Lead to Mobile Phone Dependency

The study found that there were different motivating factors for the use of phones among students. In order of prevalence, the motivating factor of other needs came first with 46.8 percent. It was followed by the motivating factor of communication (43.7%), the factor for studying (39.1%), then in fourth position the motivating factor or entertainment (32.9%), and at last the motivating factor for making friends (23%). The quest for entertainment was pushing the participants to access social media and increasing their time on the mobile phone. It was appearing that the motivating factors were fueling the desire of secondary school students to access their mobile phone. The continuous access to mobile phone was at the same time exposing secondary school students at the risk of deteriorating their psychological wellbeing.

5.2.3 Mobile Phone Applications and the Influence on the Psychological Wellbeing

The 343 students who took part in the survey answered the question about using mobile phone applications. The following mobile phone applications were given a preference rating by the participants: Facebook, WhatsApp, Instagram, TikTok, You Tube, and Google. The study's findings revealed that Tiktok (41.4%) was the most widely used and accessed mobile phone app, followed by Instagram (40.8%), WhatsApp (376.6%), You Tube (37.3%), Google (29.4%), and Facebook (14.3 percent). The Pearson correlation analysis showed that the standard deviation had a value of 1.5 and even more below the mean. It was the indication of the negative interference of social media on the wellbeing of secondary school students. The multiple regression analysis results confirmed the negative influence of social media applications on the psychological wellbeing of secondary school students.

5.2.4 Strategies in Place in the Management of Mobile Phone Dependency

A sizable portion of the participants supported the notion of raising awareness about mobile phone use among secondary school pupils. The idea to increase mobile phone use sensitization among secondary school students received support from 102 participants (29.7%), 101 participants (29.4%), 101 participants (29.4%), and 1 participant (0.3%).

The participants were asked to react to the idea of tasking the parents in the monitoring of the children' mobile phone use. The respondents came up with different views. But two tendencies emerged from the students' feedback. Some 86 respondents (25.1%), 66 respondents (19.2%), and 2 respondents (0.6%) came in support to the suggested strategy, respectively with strongly agree, somewhat agree and a little agree. On the other hand, 69 (20.1%) and 74 respondents (21.6%) disagreed respectively with somewhat and strongly. Some other 46 respondents (13.4%) were undecided. The finding was clear that the number of respondents who accepted the monitoring of their mobile phone use by parents was quite significant.

In response to the third strategy which was stating that the management should ban the use of mobile phone during class hours, the tendency was in favour of the ban. This was translated in these figures: a total of 55.1% represented by 104 (30.3% strongly agree) and 85 respondents (24.8% somewhat agree) opted for the idea of banning the use of mobile phone during class hours.

In this section of the research, some key informants were consulted in order to get their views in the matter of mobile phone use by secondary school students. They shared their ideas and suggested some more strategies. They described the mobile phone as a valuable tool which could be beneficial in students' lives, though uncontrolled use could be disastrous. They agreed on the ban of use of mobile phone during class hours unless for academic purposes. They argue that a complete ban of the mobile phone among secondary school students could be counterproductive. When mobile phone use is prohibited, it turns into an illicit activity. This situation could force students to concealed it, which could ultimately be harmful to the same pupils. It was therefore important to address the issue related to its use and not banning its use. The key informants suggested that the sensitization concerning the effect of mobile phone to be effective among secondary school students. There was need of joining hands with parents in the monitoring and management of mobile phone by secondary school students. It would be also important to control, reduce and or channel the access of students to some social media platforms.

5.2.5 Hypothesis Testing

The study's main premise was that there was no connection between the length of time chosen secondary school pupils in Nairobi County used their mobile phones and their

psychological wellness. After doing the Pearson statistical computation, the outcome was 0.885 with a Pearson correlation of -0.008. The value of 0.885 indicated the presence of a strong correlation between the variables. But the negative Pearson correlation (-0.008) showed that strong correlation was in the negative direction.

5.3 Conclusion

The purpose of this study was to evaluate student mobile phone dependency and their psychological wellbeing in a sample of schools in Nairobi County, Kenya. The study was built around four distinct goals. These goals included figuring out the impact of mobile phone use duration on students' psychological wellbeing in particular secondary schools in Nairobi County (1), evaluating the motivating factors that lead to students' mobile phone dependence in particular secondary schools in Nairobi County (2), and identifying the frequently used mobile phone applications that have an influence on students' psychological wellbeing in particular secondary schools in Nairobi County (3). Additionally, to pinpoint the methods employed in treating secondary school kids' smartphone addiction (4).

The results from these four particular objectives revealed that the secondary school pupils were everyday devoting a significant amount of time 4 to 5 hours daily on their mobile phone. The time spent on the mobile was detrimental to their psychological wellbeing (1). It appeared that secondary school students had other unrevealed reasons motivating them to use the mobile phone. The demand for communication and amusement, among other specific needs, came next (2). The secondary school pupils used social media in equal measure. The Tiktok app won out over other apps like Instagram and WhatsApp in terms of popularity (3). The majority of secondary school pupils felt that it was important to educate students about the proper usage of mobile phones. They agreed that parents should keep an eye on how their kids are using their phones. Other approaches were offered, like limiting access or disabling access to certain social networking platforms (4).

The inferential statistics were indicating a negative Pearson’s correlation as well as the multiple regression results. The study concluded that the use of mobile phone in terms of accessing the social media applications was negatively interfering with the psychological wellbeing of secondary school students.

5.4 Recommendations

Recommendations are made to different Stakeholders involved in the education of the secondary school students. These are the Education Policy Makers, the School Administration, the Parents and to the Secondary school students themselves.

- To the Education Policy Makers, this study recommends the re-evaluation of the mobile phone ban in schools considering the fact that the mobile phone has a lot of academic potentialities
- To the School Administration, the study is recommending to build an efficient guidance and counselling structure in order to provide preventive, protective and coping strategies in connection to the psychological wellbeing of secondary school students.
- To the Parents, this study is recommending their participation and involvement in the monitoring of the mobile phone use by their children.
- To the secondary school students, the study is recommending them to use responsibly their mobile phone knowing that it interferes with their psychological wellbeing.

5.5 Recommendation for Further Research

The findings of this study demonstrated a significant relationship between the user's psychological health and the time spent using a mobile phone. These are a few recommendations for additional study.

1. This area of research might benefit from a comparison between secondary school pupils who have access to mobile phones after class and those who do not.

2. This topic is important for counselling sector. Further research can explore more on the quality of counselling services in schools.

REFERENCES

Abadali, K. R., Asatsa, S., & Ntaragwe, M. (2021). Adolescents social networking and self-concept in public mixed day secondary schools in Kajiado North sub county, Kenya. *International Journal of Research and Innovationin Social Science*. 5 (*7*) 841-847.

Abbott, R.A., Ploubidis, G.B., Huppert, F.A., Kuh, D., & Croudace, T.J. (2010). An Evaluation of the precision of measurement of Ryff's Psychological Well-Being Scales in a population sample. *Soc Indic Res*. 97. 357–373. DOI 10.1007/s11205-009-9506-x.

Adnan, N. L., Ramli, S., & Noornisa, I.I. (2021). Investigating the usefulness of TikTok as an educational tool. *International Journal of Practices in Teaching and Learning*. 1 (*2*) 1-6.

Aggor, C. S., Tchao, E.T., Keelson, E., & Diawuo, K. (2011). *Mobile Phone Usage among Senior High and Technical School Students in Ghana and Its Impact on Academic Outcomes. A Case Study*. Springer. Verlag. Berlin.

Ajike, A.K., & Nwakoby, N.P. (2016). The Impact of social networking sites on teenagers in Nigeria. *International Journal of Public Policy and Administrative Studies*. 11 (*1*) 35-64.

Akakandelwa, A., & Walubita, G., (2017). Social media use and its perceived impact on their social life: A case study of the University of Zambia. *The International Journal of Multi-Disciplinary Research*. CFP/359/20, 1–14. www.ijmdr.net.

Akaranga, S. I., & Makau, B. K. (2016). Ethical consideration and their application to a research. *Journal of Educational Policy and Entrepreneurial Research*, 10 (*12)* 1–9.

Akintola, I. (2021). Impact of social media on teenagers: Nigeria experience. *Journal of Media & Management*. 3 (*4*) 1-7.

Akoblu, H. (2018). User's guide to correlation coefficients. *Turkish Journal of Emergency Medecine*. 18. 91-93. doi.org/10.1016/j.tjem.2018.08.001.

Ali, S., Shah, M., & Qasim, A. (2021). Effect of mobile phones on mental health of secondary school students. *International Journal of Science and Innovative Research*. 2 (*3*) 4-9.

Alshobramy, H. (2019). The effectiveness of Bandura's social learning theory in learning english speaking skill among secondary school efl students. *International Journal of Vocational and Technical Education Research*, *5*(*5*), 11–23. https://www.eajournals.org/wp.

Anderson, M., & Jiang, J. (2018). Teens, social media & technology. *Pew Research Center*. www.pewresearch.org.

Anokye, A. M. (2020). Sample size determination in survey research. *Journal of Scientific Research and Reports*. 26 *(5*) 90–97. https://doi.org/10.9734/jsrr/2020/v26i530263.

Arifin S.R.M. (2018). Ethical considerations in qualitative study. *International Journal of Care Scholars.* 1 (*2*) 30-33.

Azeroual, O., & Abuosba, M. (2019). Improving the data quality in the research information systems. *International Journal of Computer Science and Information Security*. 15(*11*), 82–86. http://arxiv.org/abs/1901.07388.

Bandura, A. (1986). Social Cognitive Theory . *Annals of child development*, 1-60.

Boer, M., Eijnden, R.J.J.M., Boniel-Nissim, M., Wong, S.L., Inchley, J.C., Badura, P., Craig, W.M., Gobina, I., Kleszczewska, D., Klanscek, H.J., & Gonneke, W.J.H.S. (2020). Adolescents' intense and problematic social media use and their well-being in 29 countries. *Journal of Adolescent Health*. 66 s89-s99. https://doi.org/10.1016/j.jadohealth.2020.02.014

Beneito, P., & Chirivella, O.V. (2020). Banning mobile phones at schools: Effects on bullying and academic performance. *Discussion Papers in Economic Behaviour*. 1-21.

Brodersen, K., Hammami, N., & Katapally, T.R. (2022) Smartphone use and mental health among youth: It is time to develop smartphone-specific screen time guidelines. *Youth*, 2, 23–38. https://doi.org/10.3390/youth2010003.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design.* Cambridge: Harvard University Press.

Bukowa, B. (2017). Young people and the digital age: An investigation of the sociability' of teenagers in Lusaka. *The International Journal of Multi-Disciplinary Research.* 1-7.

Burdick, C. L. (2014). The Merits, Limitations, and Modifications of Applying Bandura's Social Learning Theory to Understanding African American Children's Exposure to Violence. *American International Journal of Social Science, 3*(*5*), 183. www.aijssnet.com

Casteel, A., & Bridier, N. L. (2021). Describing populations and samples in doctoral student research. *International Journal of Doctoral Studies*. *16*, 339–362. https:// doi.org/10.28945/4766

Cha, S.S., & Seo, B.K. (2018). Smartphone use and smartphone addiction in middle school students in Korea: prevalence, social networking service, and game use. *Health Psychology Open*. 1-15. https://doi.org/10.1177/20551029187550.

Chao, C.S., Li, M.H., Chang, S.P., & Chen, Y.H. (2022). Multiple logistic regression analysis of smartphone Use in University students. *Frontiers in Psychology*. 13 (*821345*) 1-7 doi: 10.3389/fpsyg.2022.821345.

Christensen, J. (2016). A Critical reflection of Bronfenbrenner´S Development Ecology Model. *Problems of Education in the 21st Century*, 69 (*1*), 22–28. https:// doi. org/10.33225/pec/16.69.22.

Chuang, S. (2021). The Application of Constructivist Learning Theory and Social Learning Theory on adult continuous development. *Performance Improvement*, 6-14.

Chueng, M.C., Lai, J.S.K., & Yip, J. (2022). Influences of smartphone and computer use on health-related quality of life of early Adolescents. *International Journal Environmental Research and Public Health*. 19 (*2100*) 1-13. https://doi.org/10.3390/ijerph19042100.

Clayton, J. (2021). *Frances Haugen: Facebook whistleblower reveals identity.* London: BBC.

Committee (2018). County Annual Development Plan (CADP) 2019/2020. Nairobi: Nairobi City Council.

Dietriech, J.J., Otwombe, K., Pakhomova, T.E., Horvath, K.J., Hornschuh, S., Hlongware, K., Closson, K., Mulaudzi, M., Smith, P., Betsinska, M., Gray, G.E., Brockman, M., Smit, J., & Kaidaon, A. (2021). High cellphone use associated with greater risk of depression among young women aged 15-24 years in Soweto and Durban, South Africa. *Global Health Action.* 14*(1)*, 1936792, DOI: 10.1080/16549716.2021.1936792.

Dhakal, C.P. (2018). Interpreting the basic outputs (SPSS) of multiple linear regression. *International Journal of Science and Research*. 7 (*426*) 1448-1452. DOI:10.21275/4061901

Dilon, C. (2021). Tiktok influences on teenagers and youth adult students: The common usages of the application Tiktok. *American Scientific Research Journal for Engineering, Technology and Sciences.* 60 (*1*) 1-10.

Ding, D., & Li, J. (2017). Smartphone Overuse – A Growing Public Health Issue. *Journal of Psychology & Psychotherapy*, 07(*01*), 2–4. https://doi.org/10.4172/2161-0487.1000289.

Edinyang, S.D. (2016). The Significance of social learning theories in the teaching of social studies education. *International Journal of Sociology and Anthropology Research*. 2 (*1*) 40-45.

Egan, A.C. (2016). *The Psychological Impact of Smartphones: The Effect of Access to One's Smartphone on Psychological Power, Risk Taking, Cheating, and Moral Orientation*. (Doctoral Dissertation, Loyola University) Chicago.

Ephraim, P. E. (2013). African youths and the dangers of social networking: A culture-centered approach to using social media. *Ethics and Information Technology*, 15 (*4*), 275–284. https://doi.org/10.1007/s10676-013-9333-2.

Fernandez, C., Vicente, M.A., Carrillo, I., Guilabert, M., & Mira, J.J. (2020). Factors influencing the smartphone usage behaviour of pedestrians: Observational study on "Spanish smombies. *Journal of Medical Internet Research.* 22 (*8*) 1-19. Doi: 10.2196/19350.

Fraser J., Fahlman, D., Arscott, J., & Guillot, I. (2018). Pilot testing for feasibility in a study of student retention and attrition in online undergraduate programs. *International Review of Research in Open and Distributed Learning*. 19 (*1*) 265-278.

Gadzama, W., Bitrus, J., & Maigana, N. (2017). Global smartphone ownership, internet usage and their impacts on Humans. *Journal of Communications Networks*. 1 (*1*) 1-10.

Gallup World Poll (2017). *Access to Mobile Phones and Internet around the World*. Spotlight.

Garcia, D., Nima, A.A., & Kjell, O.N.E. (2014). The affective profiles, psychological well-being, and harmony: environmenatl mastery and self-acceptance predict the sense of a harmonious life. *PeerJ*. 2-21. DOI 10.7717/peerj.259.

Gedik, H., & Cosar, H.A. (2020). Perception of social media in secondary students. *International Education Studies*. 13 (*3*) 6-17.

Gibbons, A., Galloway, D., Mollel, A., Mgoma, S., Pima, M., & Deogratias, E. (2018). Mobile phone use in two secondary schools in Tanzania. *Education and Information Technologies*, 23(*1*), 73–92. https://doi.org/10.1007/s10639-017-9586-1.

Gomez, M., Marchena, J.A.M., Varela, R.S., & Espejo, M.J.P. (2020). Using mobile devices for educational purposes in compulsory secondary education to improve students' learning achievements. *Sustainability*. 12 (*3724*) 1-12. doi:10.3390/su12093724.

Hayes, N., O' Toole, L., & Halpenny, A.M. (2017). Introducing Bronfenbrenner: A Guide for Practitioners and Students in Early Years Education. Routledge. London.

Jarasunas, A. (2020). *Put the phone down: The Implications of Social Media Use for Teenagers.* Santa Barbara: University of California.

Jena, N., & Shekhar, S. (2020). A Study on impact of smart-phone usage on academic performance of Upper Primary students in Delhi. *Psychology and Education*. 57 (*9*). 2863-2867.

Kabisa, S., & Chibomba, K. (2018). Contribution to a conducive learning environment : Use of mobile phones in Urban Schools of Kalabo District. *The International Journal of Multi-Disciplinary Research. 704.* 1–9.

Kazak, C. (2017). Ethical considerations: Research with people in situations of forced migration. *Canada's Journal on Refugees*. 33 (*2*) 11-17.

Kennedy, I. (2020). The Impact of the social media on the academic performance of secondary school students in Benin Metropolis. *Journal of Advances in Education and Philosophy, 4* (7), 334–343. https://doi.org/10.36348/jaep.2020.v04i07.005.

Kvardova, N., Valkovicova, N., & Smahel, D. (2019). Do mobile phone bans work? Rules and the use of technology in school in relation to adolescents' behavior. Research report from primary and secondary schools 2019. (The Masaryk University). Brno. DOI: 10.13140/RG.2.2.23324.64642.

Lamb, N., Ford, V., Grant, B., Gyimah, S., Jones, D., Kendall, L., Metcalfe, S., Monogham, C., Moore, D., Strinfer, G., & Whitfield, M. (2019). *Impact of Social Media and Screen-Use on Young People's Health*. House of Commons. London 269–272.

Lakshmi, K. S. R., (2016). Smartphone impact on today ' s society. *International Journal of Multidisciplinary Research and Developmen*, 3 (*5*), 269–272.

Lee, J., Sung, M.J., Song, S.H., Lee, Y.M., Lee, J.J., Cho, S.M., Park, M.K., & Shin, Y.M. (2018). Psychological factors associated with smartphone addiction in South Korean adolescents. *Journal of Early Adolescents.* 38 (*3*), 288-302. DOI: 10.1177/ 0272431616670751.

Lee, S.P., Zamimi, H.A., Sharifah, M.S.A., Atan, A., & Makhdzir, N. (2021). Smartphone use and addiction among secondary school students in Kuantan, Malaysia. *International Journal of Care Scholars. 4* (*1*). 36-41.

Lombo, L. S. (2015). Second Chance for School Dropouts in Kenya through Adult Education. (Doctoral Dissertation- Walden University) Walden.

Madakam, S., & Tripathi, S. (2021). Social media/networking: Applications, technologies, theories. *Journal of Information Systems and Technology Management*, *18*. https://doi.org/10.4301/s1807-1775202118007.

Majid, U. (2018). Research fundamentals: Study design, population, and sample size. *Undergraduate Research in Natural and Clinical Science and Technology (URNCST) Journal*, 2 (*1*), 1–7. https://doi.org/10.26685/urncst.16.

Markwei, E.D., & Appiah, D. (2016). The impact of social media on Ghanian Youth: A case study of the Nima and Maamobi communities in Accra, Ghana. *The Journal of Research on Libraries and Young Adults.* 7 (*2*), 1–26.

Mascia, M.L., Agus, M., & Penna, M.P. (2020). Emotional intelligence, self-regulation, smartphone addiction: which relationship with students well-being and quality of life? *Frontiers in Psychology*. 11 (*375*) 1-7 doi: 10.3389/fpsyg.2020.00375.

McLeod, S. (2016). Bandura - Social Learning Theory. *Simply Psychology*, 1-5.

Meng, H., Cao, H., Hao, R., Zhou, N., Liang, Y., Wu, L., Jiang, L., Mas, R., Li, B., Deng, L., Lin, Z., Lin, X., & Zhang, J. (2020). Smartphone use motivation and problematic smartphone use in a national representative sample of Chinese adolescents: The mediating roles of smartphone use time for various activities. *Journal of Behavioral Addictions.* 9 (*1*), 163-174 DOI:10.1556/2006.2020.00004.

Meterko, M., Restuccia, J., Stolzmann, K., Mohr, D., Brennan, C. Glascow, J., & Kaboli, P. (2015). Response rates, non-response bias and data quality. *Public Opinion Quarterly*. 79 (*1*) 130-144 doi:10.1093/poq/nfu052.

Mgaya, M.M. (2020). *An Assessment of Mobile Phones Usage among the Secondary School Students in Tanzania: A Case Study of Kibiti District*. (Masters Degree Dissertation, Open University of Tanzania), Tanzania.

Ministry of Education (2021). *Education Sector Report. Medium Term Expenditure Framework 2022/23- 2024/25.*

Morris, P., & Sarapin, S. (2020). Mobile phones in the classroom: Policies and potential pedagogy. *Journal of Media Literacy Education*, 12 (*1*), 57–69. https://doi. org/ 10.23860/JMLE-2020-12-1-5.

Muigai, N., & Mantz, S. (2019). *Mobile Phone Consumer Survey. Kenyan Cut*. Deloitte. United Kingdom.

Munderia, R., & Singh, R. (2018). Mobile phone dependence and psychological well-being among young adults. *Indian Journal of Community Psychology*. 14 (2) 321-332.

Munusamy, K. A., & Ghazali, A. H. A. (2020). Effects of mobile phone usage behavior and mobile phone addiction among Youth. *International Journal of Academic Research in Business and Social Sciences*, 10 (*16*), 134–145. https://doi.org/10.6007/ijarbss/v10-i16/8297.

Mwadime, E.M. (2015). *An Investigation of the Impact of Online Social Networking on Academic Performance among High School Students in Urban Areas: A Case Study of Westlands Sub-County, Nairobi.* (Masters Degree Dissertation,University of Nairobi), Kenya .

Nabila, N.A. (2019). Social interaction among adolescents who use social media. *Advances in*

Social Science, Education and Humanities Research. (*395*) 1-9.

Nagaraju, V., Mani, N., & Reddy, S.M. (2019). Determinants of the socio-economic statuts-literature evidence. *Think India- Quarterly Journal*. 22 (*4)* 10457-10478.

Ndegwa, S., & Mwangi, P. (2020). The Psychological effects of mobile phone usage among the youth: the case of a selected christian university. *Journal of Language, Technology & Entrepreneurship in Africa.* 11(*1*) 29–38.

Newman, K., Harrison, L., Dashiff, C., & Davies, S. (2008). Relationships between parenting styles and risk behaviour in adolescent health: An integrative literature review. *Rev. Latino-am Enfernagem*. 16 (*1*) 142-150.

Nganga, C., & Bundi, N.G. (2018). An Assessment of Social Media usage among TVET students in Kiambu county, Kenya. *International Journal of Novel Research in Interdisciplinary Studies*. 5 (*6*) 9-17.

Nikolopoulou, K. (2019). Motivation and mobile devices usage at school: Pupils opinions. *American Journal of Education and Information Technology*. 3 (*1*) 6-11.

Njihia, R. W. (2017). Mobile phone learning in secondary school sector, Kenya. *International Journal of Scientific Research and Innovative Technology*, 4 (*6*), 1–10.

Nowell, L.S., Norris, J.M., White, D.E., & Moules, N.J. (2017). Thematic analysis: striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*. 16: 1–13. DOI: 10.1177/1609406917733847.

Nyagah, V.W., Asatsa, S., & Mwania, J.M. (2015). Social networking sites and their influence on the self-esteem of Adolescents in Embu county, Kenya. *Journal of Educational Policy and Entrepreneurial Research*. 2 (*1*) 87-92.

Nyongesa, S.C., Kiprop, C., & Chumba, S. (2019). Influence of Social Media on Students' Discipline in Secondary Schools in Kenya. *Global Journal of Arts, Humanities and Social Sciences*, 7 (*9*) 41-63.

Nyongesa, S.C., Kiprop, C., & Chumba, S. (2019). School strategies for managing social media influence on Students' Discipline in Kenyan Secondary Schools . *International Journal of Education, Learning and Development*, 7 (*10*) 62-77.

O'Bannon, B.W., Waters, S., Lubke, J., Cady, J., & Rearden, K. (2017). Teachers and students oised to use mobile phones in the classroom. *Interdisciplinary Journal of Practice, Theory, and Applied Research*. 34 (*3*) 125-141. DOI: 10.1080/07380569.2017.1347454.

Odgers, C. (2018). Smartphones are bad for some adolescents, not all. *HHS Public Access* 554 (*7693*) 432–434. doi:10.1038/d41586-018-02109-8.

Ogushi, O.A., Ajaegbu, C., & Oluwaseyi, A.S. (2019). Pespective smartphone technological advancement trends: a scheme for knowledge acquisition towards societal development. *Information Technology Journal.* 18(*1*), 1-7. DOI: 10.3923/itj.2019.1.7.

Ong, M. H. A., & Puteh, F. (2017). Quantitative Data Analysis: Choosing between SPSS, PLS and AMOS in Social Science Research. *International Interdisciplinary Journal of Scientific Research, 3*(*1*), 14–25. www.iijsr.org

Pandey, P., & Pandey, M.M. (2015). *Research Methodology: Tools and Techniques*. Bridge Center. Busau. Romania.

Peppler, K. (2017). *Ecological Systems Theory.* Thousand Oaks: SAGE Publications.

Pfeiffer, C., Kleeb, M., Mbelwa, A., & Ahorlu, C. (2014). The use of social media among adolescents in Dar es Salaam and Mtwara, Tanzania. *International Journal on Sexual and Reproductive Health and Rights*. 22 (*43*) 178-186. DOI: 10.1016/S0968-8080(14)43756-X.

Pooje, S.T., Zhou, C., Mogan, C.H., & Christakis, D.A. (2021). Cell phone use policies in US middle and high schools. *Jama Network Open.* 3 *(5*) 1-4. doi:10.1001/ jamanetworkopen.2020.5183.

Popoola, O.A., & Ayandele, O. (2019). Mental Health Outcomes of Smartphone Addiction among Female Undergraduates in Ibadan, Nigeria: Implications for Actualizing the SDGs. Retreived from DOI:10.13140/RG.2.2.11950.25922.

Raj, M., Bhattacherjee, S., & Mukherjee, A. (2018). Usage of online social networking sites among school students of Siliguri, West Bengal, India. *Indian Journal of Psychological Medecine*. 40 (*5*) 452-457.

Reilly, M.O., Dogra, N., Whiteman, N., Hughes, J., Eruyar, S., & Reilly, P. (2018). Is social media bad for mental health and wellbeing? Exploring the perspectives of adolescents. *Clinical Child Psychology and Psychiatry.* 1-32. DOI: 10.1177/1359104518775154.

Rodriguez, S., & Merryman, A. (2021) Electronic device use: how it affects the well-being of children and adolescents. *Electronic Theses, Projects, and Dissertations*. 1215. https://scholarworks.lib.csusb.edu/etd/1215.

Roig-Vila, R., Espinosa, P., & Solano, M.U. (2020). Problematic smartphone use in Spanish and Italian University students. *Journal of Sustainability.* 12 (10255) doi:10.3390/su122410255.

Roomaney, R., & Coetzee, B. (2018). Introduction to and application of Mixed Method Research Designs. In Kramer, S., Laher, S., Fynn, A., Janse Van Vuuren, H.H. (Eds). *Online Readings in Research Methods*. Psychological Society of South Africa: Johannesburg. http://doi.org/10.17605/OSF.10/BNFS.

Rotich, L., & Kiprop, C. (2017). Effect of involvement culture on performance of selected 5-star chain affiliated-hotels in Kenya. *Elixir International Journal*. 108. 47651-47654.

Rotondi, V., Stanca, L., & Tomasuolo, M. (2017). Connecting alone: Smartphone use, quality of social interactions and well-being. *Journal of Economic Psychology*. 63. 17-26.

Salgado, A. (2014). Review of empirical studies on impact of religion, religiosity and spirituality as protective factors. *Propositos y Representaciones*. 2 (*1*) 142-159.

Saquib, J. (2018). Social Ecological Model as a framework for understanding screen time and sedentary behavior among Arab adolescents. *International Journal of Health Sciences*. 12 (*3)* 1-2.

Schober, P., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia and Analgesia*, 126(*5*), 1763–1768. https: //doi. org/ 10.1213/ ANE.0000000000002864.

Shanti, B.M., & Alok, S. (2017). *Handbook of Research Methodology*. New Delhi: Educeation Publishing. Dwarka, New Delhi.

Siddiqi, N., Kamal, M.H., Moin, F., Rafei, M.R., Maqbali, R., Battashy, A.S.A., & Aamer, B.S. (2020). The Prevalence of mobile phone use in the school going children in North Al Batinah Region of Oman: A cross sectional study. *Biomedical & Pharmacology Journal*. 13 (4) 1993-2002.

Skjott, M.L., & Korsgaard, S. (2019). Coding qualitative data: a synthesis to guide the novice. *Qualitative Research Journal.* 19 (*3*) 259-270. https://doi.org/10.1108/QRJ-12-2018-0012.

Sohn, S.Y., Rees, P., Wildridge, B., Kalk, N.J., & Carter, B. (2019). Prevalence of problematic smartphone usage and associated mental health outcomes amongst children and young people: a systematic review, meta-analysis and grade of the evidence. *BMC Psychiatry* 19 *(356)* 1-10. https://doi.org/10.1186/s12888-019-2350-x.

Tabassum, S. A., & Parveen, A. (2018). Mobile Phone Usage in relation to Self-esteem and Loneliness among girl students. *International Journal of Research in Social Sciences*. 8 (*6*), 228–239.

Taleb, B.R.M.A., Coughlin, C., Romanowski, C.C., Semmar, Y., & Hosny, H.K. (2017). Students, mobile devices and classrooms: a comparison of US and Arab undergraduate students in a Middle Eastern University. *Higher Education Studies*. 7 (*3*) 181-195.

Tangmunkongvorakul, A., Musumari, P.M., Thongpibal, K., Srithanaviboonchai, K., Techasrivichien, T., Suguimoto, S.P., Kihara, M.O., & Kihara, M. (2019). Association of excessive smartphone use with psychological well-being among university students in Chiang Mai, Thailand. *Plos One*. 14 (1) 1-13.

Tarimo, R., & Kavishe, G. (2017). Internet access and usage by secondary School students in Morogoro Municipality, Tanzania. *International Journal of Education and Development Using Information and Communication Technology*, 13 (*2*), 56–69. http: // ijedict.dec.uwi/viwarticl.php?id=2338

Tezci, E., & Icen, M. (2017). High school students social media habits. *Journal of Education and Practice*. 8 (*27*) 99-108.

The European Institute for Gender Equality (2016). *Gender Equality in Academia and Research*. Vilnius, Lithuania.

The Research Council of Norway (2014). *Gender Balance and Gender Perspectives in Research and Innovation*. Oslo.

Thomée, S. (2018). Mobile phone use and mental health. A review of the research that takes a psychological perspective on exposure. *International Journal of Environmental Research and Public Health*, 15 (*2692*) 1-25. doi:10.3390/ijerph15122692.

Tracy, J. M., & McKinnon, B. (2021). Facebook Whistleblower's Testimony Builds Momentum for Tougher Tech Laws. *Wall Street Journal*, 1-1.

Trucano, M. (2015). Banning and unbanning phones in schools. Retrieved from EduTech: https://blogs.worldbank.org/edutech/banning-and-unbanning-phones-schools.

Tudge, J.R., Mercon-Vargas, E.A., Liang, Y., & Payir, A. (2017). The importance of Urie Bronfenbrenner's bioecological theory for early childhood educators and early childhood education. In L. C. Stupiansky, *Theories of early childhood education: Developmental, behaviorist, and critical* (pp. 45-57). New York: Routledge. https://doi.org/10.4324/9781315641560

Turner, A. (2021). *September 2021 Mobile User Statistics: Discover the Number of Phones in The World & Smartphone Penetration by Country or Region.* New York: BankMycell

Twenge, J.M., Martin, G.N., & Spitzberg, B.H. (2019). Trends in US. adolescents' media use, 1976-2016: The rise of digital media, the decline of TV, and the demise of print. *Psychology of Popular Media Culture*. 8 (*4*) 329-345.

Vaidya, D. A., Pathak, V., & Vaidya, A. (2016). Mobile Phone Usage among Youth. *International Journal of Applied Research and Studies*, 5 (*3*). 1-7. https: //doi.org/ 10.20908/ijars.v5i3.9483.

Velez-Agosto, N., Crespo, J.G.S., Oppenheimer, M.V., Molina, S.V., & Coll, C.G. (2017). Bronfenbrenner's biological theory revision: Moving culture from the macro into the micro. Association fro Psychological Science. 12 (5) 900-910. https://doi.org/ 10.1177/1745691617704397.

Wamuyu, P.K. (2018). *Social Media Consumption in Kenya: Trends and Practices*. SIMELab, Nairobi.

Wamuyu, P.K. (2020). *The Kenyan Social Media Landscape: Trends and Emerging Narratives 2020*. SIMELab, Nairobi.

Wang, X. (2019) Mobile SNS addiction as a learned behavior: a perspective from Learning Theory. *Media Psychology*. 23 (*3*) DOI:10.1080/15213269.2019.1605912.

William, L. (2016). Influencing factors to mobile phone adoption among urban youth in Botswana. *Journal of Media and Communication Studies,* 8 (*1*), 8–14. https://doi.org/10.5897/jmcs2015.0474.

Wolfers, L.N., Festl, R., & Utz, S. (2020). Do smartphones and social network sites become more important when experiencing stress? Results from longitudinal data. *Computers in Human Behavior*. 109. 1-11.

Yavich, R., & Davidovitch, N. (2021). Is personality related to risks associated with smartphones? *The European Educational Researcher*, 4 (*1*), 29–42. https :// doi. org /10.31757/euer.412.

Zaid, M.A. (2015). *Correlation and Regression Analysis*. CESRIC, Ankara, Turkey.

Zulkefly, S., & Baharudin, R. (2009). Mobile phone use amongst students in a university in Malaysia: Its correlates and relationship to psychological health. *European Journal of Scientific Research*. 37 (*2*) 206-218.

APPENDICES

APPENDIX I: PERMISSION TO CONDUCT A RESEARCH IN THE SCHOOL

To the School Administration

Dear School Manager.

I am hereby to request your permission to allow me proceeding with the research study among the students who are under your care. My name is Cyprien Nkoma, a Post graduate student of The Catholic University of Eastern Africa. I am conducting this research as part of the requirement for completing a Master's degree programme in Counselling Psychology.

The purpose for this study is to collect data concerning the access of students to mobile phone among Secondary School Students. The participation of students in this research is very important. It will provide valuable information for an appropriate understanding and management of mobile phone use among secondary school students in Nairobi county and all secondary school students in Kenya at large.

The participation in the study must be freely consented and all the information provided will be treated with confidentiality. The students will not be required to provide personal information that might identify them personally on the questionnaire. However, the results of the study will be analysed and published as a thesis project and may also be shared with the public. The consent form and the questionnaire will be destroyed upon the completion of this study which is anticipated to be by May 2022.

For your permission.

School Manager's Signature_____

Thank you for your informed consent to allow students to participate in this study.

APPENDIX II: CONSENT TO PARTICIPATE IN RESEARCH

Dear Student,

You are being asked to participate in this research conducted by Cyprien Nkoma, a Post graduate student of The Catholic University of Eastern Africa. This research is part of the requirement for completing the Master's degree programme in Counselling Psychology.

The purpose for this study is to collect data concerning the use of mobile phone among Secondary School Students. You are therefore kindly requested to respond to the questionnaire according to your personal experience in the use of the mobile phone.

Your participation in this research is very important. It will provide valuable information for an appropriate understanding and management of mobile phone use among secondary school students in Nairobi county, and all secondary school students at large.

Your participation in the study is freely consented and all the information provided will be treated with confidentiality You will not be required to provide personal information that might identify you personally on the questionnaire. However, the results of the study will be analysed and published as a thesis project and may also be shared with the public. The consent form and the questionnaire will be destroyed upon the completion of this study which is anticipated to be by May 2022.

Participant's Signature_____

Thank you for your informed consent to participate in this study.

APPENDIX III: HEAD OF SCHOOL' CONSENT TO PARTICIPATE IN RESEARCH

Dear Head of School,

I wish you are well. My name is Cyprien Nkoma, a Post graduate student at The Catholic University of Eastern Africa. As part of the completion of the Master's degree programme in Counselling Psychology, there is a requirement of conducting a research study. This is the reason for my contact with you.

The purpose for this study is to collect data concerning the access of students to mobile phone and its effect on their psychological wellbeing. I'm, kindly, requesting your participation in responding to the questionnaire according to your personal experience.

Your participation in this research is very important. It will provide valuable information for an appropriate understanding and management of mobile phone use among secondary school students.

Your participation in the study is freely consented and all the information provided will be treated as confidential. You will not be required to provide personal information that might identify you personally on the questionnaire. However, the results of the study will be analysed and published as a thesis project and may also be shared with the public. The consent form and the questionnaire will be destroyed upon the completion of this study which is anticipated to be by May 2022.

Participant's Signature_____

Thank you for your informed consent to participate in this study.

APPENDIX IV: COUNTY EDUCATION' CONSENT TO PARTICIPATE IN RESEARCH

Dear County Education Officer,

I wish you are well. My name is Cyprien Nkoma, a Post graduate student at The Catholic University of Eastern Africa. As part of the completion of the Master's degree programme in Counselling Psychology, there is a requirement of conducting a research study. This is the reason for my contact with you.

The purpose for this study is to collect data concerning the access of students to mobile phone and its effect on their psychological wellbeing. I'm, kindly, requesting your participation in responding to the questionnaire according to your personal experience.

Your participation in this research is very important. It will provide valuable information for an appropriate understanding and management of mobile phone use among secondary school students.

Your participation in the study is freely consented and all the information provided will be treated as confidential. You will not be required to provide personal information that might identify you personally on the questionnaire. However, the results of the study will be analysed and published as a thesis project and may also be shared with the public. The consent form and the questionnaire will be destroyed upon the completion of this study which is anticipated to be by May 2022.

Participant's Signature_____

Thank you for your informed consent to participate in this study.

APPENDIX V: QUESTIONNAIRE FOR STUDENTS

A: Background information

Instruction: tick or cross in the appropriate box according to you

1. Gender: Male [ ] Female [ ]

2. Cluster: A [ ] B [ ] C [ ]

3. School category: Boys day [ ] Girls day [ ] Mixed day [ ] Boarding [ ]

4. Age 10 – 12 [ ] 13- 16 [ ] 17- 19 [ ] Above 19 [ ]

5. Form F1 [ ] F2 [ ] F3 [ ] F4 [ ]

6. Family status: are you currently staying:

with your parents [ ] with your mother [ ] with your father [ ] with the extended family [ ]

7. Religious faith: my family is having

a Christian belief [ ] a Muslim belief [ ] other beliefs [ ] none [ ]

B. **Duration in the use of the Mobile Phone**

Instruction: cross the box near the appropriate answer according to you.

1. How long have you been using a mobile phone?

0- 1 year □ 2-3 years □ 4-5 years □ 6-7 years □ 7< years □

2. For how many hours do you use your mobile phone every day?

0- 1 hour □ 2-3 hour 4- 5 hours □ 6-7 hours □ 7< hours

C. **Motivating factors for the use of mobile phone among secondary school students**

Somewhat agree= 1; Agree=2; Strongly agree=3; A little disagree=4; strongly disagree= 5.

Instruction: Circle the number for the appropriate answer according to you.

Kindly, rate your motivation for using a mobile phone for the following activities:

1. I use the mobile phone for communication	1	2	3	4	5
2. I use the mobile phone for entertainment	1	2	3	4	5
3. I use the mobile phone for studying	1	2	3	4	5
4. I use the mobile phone for making friends	1	2	3	4	5
5. I use the mobile phone for other needs	1	2	3	4	5

D. **Mobile phone applications that secondary school students are dependent on and the influence on their psychological wellbeing**

Instruction: Circle the number for the appropriate answer according to you.

Liked=1; much liked=2; very much liked=3; neutral= 4; not liked=5

Kindly, rate the way you appreciate the following social media?

1. Facebook	1	2	3	4	5
2. WhatsApp	1	2	3	4	5
3. Instagram	1	2	3	4	5
4. Tik Tok	1	2	3	4	5
5. You Tube	1	2	3	4	5
6. Google	1	2	3	4	5

E. **Strategies in place in management of mobile phone dependency among secondary school students**

Some people suggest that there is need of adopting strategies for a well-managed phone use among students.

Instruction: Circle a number of an appropriate answer according to you.

I agree=1; I strongly agree=2; I disagree=3; I strongly disagree=4; No idea=5

Kindly, provide your answer to the following statement:

1. To increase the sensitization of secondary school students in the possible side effect of the mobile phone use 1 2 3 4 5
2. Parents to monitor the use of the mobile phone by the children in secondary school 1 2 3 4 5
3. School administration to ban the use of the mobile phone during class time 1 2 3 4 5

E. Psychological Wellbeing Measurement (Ryff's Model-1995)

Strongly agree= 1; Somewhat agree= 2; A little agree= 3; Never agree or disagree= 4; A little disagree= 5; Somewhat disagree= 6; Strongly disagree= 7

Instruction: Circle the number corresponding to your answer according to your experience

1. "I like most parts of my personality." 1 2 3 4 5 6 7
2. "When I look at the story of my life, I am pleased with how things have turned out so far." 1 2 3 4 5 6 7
3. "Some people wander aimlessly through life, but I am not one of them." 1 2 3 4 5 6 7

4. “The demands of everyday life often get me down.” 1 2 3 4 5 6 7

5. “In many ways I feel disappointed about my achievements in life.” 1 2 3 4 5 6 7

6. “Maintaining close relationships has been difficult and frustrating for me.” 1 2 3 4 5 6 7

7. “I live life one day at a time and don't really think about the future.” 1 2 3 4 5 6 7

8. “In general, I feel I am in charge of the situation in which I live.” 1 2 3 4 5 6 7

9. “I am good at managing the responsibilities of daily life.” 1 2 3 4 5 6 7

10. “I sometimes feel as if I've done all there is to do in life.” 1 2 3 4 5 6 7

11. “For me, life has been a continuous process of learning, changing, and growth.” 1 2 3 4 5 6 7

12. “I think it is important to have new experiences that challenge how I think about 1 2 3 4 5 6 7

13. “People would describe me as a giving person, willing to share my time with others.” 1 2 3 4 5 6 7

14. “I gave up trying to make big improvements or changes in my life a long time ago” 1 2 3 4 5 6 7

15. “I tend to be influenced by people with strong opinions” 1 2 3 4 5 6 7

16. “I have not experienced many warm and trusting relationships with others.” 1 2 3 4 5 6 7

17. “I have confidence in my own opinions, even if they are

different from the way most other people think." 1 2 3 4 5 6 7

18. "I judge myself by what I think is important, not by the values of what others think is important." 1 2 3 4 5 6 7

F. Please, fill free to give your comments on the following questions

1. Considering the duration in the use of the mobile phone, on daily basis, how many hour do you spend daily in the use of the mobile phone?

2. Kindly, share out the reason which motivate you to use the mobile phone

3. As a person using a mobile phone, what are the social media do you like consulting?

4. In order of preference, can you mention 3 social media you like consulting and if possible explain the reason for liking it?

5. Kindly, share out about the social media you don't like or you are less interested with.

6. Share with me the reason for you not liking that social media.

APPENDIX VI: INTERVIEW GUIDE FOR HEAD OF SCHOOLS

Purpose of the study

The aim of my study is to find out about the effect of mobile phone dependency on the psychological wellbeing of secondary school students.

A. Background information

1. Gender Male [ ] Female [ ]

B. Mobile phone and time management

- What is your take on mobile phone use in schools by secondary school students?

C. Motivating factors for the use of the mobile phone

- What could be the motivating factors for secondary schools to use the mobile phone?

D. Psychological effect due to the use of mobile phone

- As an Educator, kindly share with me your experience concerning behaviors of students in regard to the use of mobile phone

E. Strategies for proper management of mobile phone among secondary school students.

1. What could be your suggestions for managing the use of mobile phone by secondary school students?

E. Any other comment

Feel free to make any comment in regard to mobile phone use by secondary school students.

Thank you for your time and cooperation

APPENDIX VII: TIME PLAN

Activity								
	June 2021	September 2021	November 2021	March 2022	April 2022	May 2022	June 2022	July 2022
Writing concept paper								
Writing proposal paper								
Making corrections on proposal paper								
Defence								
Data collection								
Data analysis and presentation								
Faculty defence								
Final defence								

APPENDIX VIII : Research Authorization Letter from CUEA

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

Faculty of Arts and Social Sciences

Department of Counseling Psychology

Our Ref: CUEA/DVC-ACAD/FASSc/Psychology/Research/Nacosti/ April 2022

Date: 7th April, 2022

TO WHOM IT MAY CONCERN

RE: RESEARCH PERMIT FOR CYPRIEN NKOMA 1040043

I am writing to introduce to you **Cypriene Nkoma** who is a final year Masters degree student at The Catholic University of Eastern Africa, Nairobi – Kenya, and to request you to assist him to accomplish her academic research requirements.

His specialization is in Counseling Psychology. He has completed all course work requirements for this programme. However, every student in the programme is required to conduct research and write a report/thesis submitted during the final years of studies.

Accordingly, his research topic has been approved. He will conduct research on the following topic:

"Mobile Phone Dependency and the Psychological Wellbeing of Selected Secondary School Students in Nairobi County- Kenya".

Thanking you in advance for any assistance.

Sincerely,

APR 2022

Dr. Stephen Asatsa,
HOD. PSYCHOLOGY.

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA (CUEA) P.O. BOX 62157 00200 Nairobi – KENYA
Tel: 020-2525811-5, 8800023-4, Fax: 8701084, Email: [illegible], Website: www.cuea.edu
Founded in 1984 by AMECEA (Association of the Member Episcopal Conference in Eastern Africa)

APPENDIX IX: Research Permit NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 256838

Date of Issue: 18/April/2022

RESEARCH LICENSE

This is to Certify that Mr.. CYPRIEN KAMENGWA NKOMA of Catholic University of Eastern Africa, has been licensed to conduct research in Nairobi on the topic: MOBILE PHONE DEPENDENCY AND PSYCHOLOGICAL WELLBEING OF STUDENTS IN SELECTED SECONDARY SCHOOLS IN NAIROBI COUNTY KENYA for the period ending : 18/April/2023.

License No: NACOSTI/P/22/16878

256838

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.

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearence from relevant Government Agencies
5. The License does not give authority to tranfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one year of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
off Waiyaki Way, Upper Kabete,
P. O. Box 30623, 00100 Nairobi, KENYA
Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077
Mobile: 0713 788 787 / 0735 404 245
E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke

APPENDIX X: Authorization Letter from the Ministry of Education

Republic of Kenya

MINISTRY OF EDUCATION

STATE DEPARTMENT OF EARLY LEARNING AND BASIC EDUCATION

Telegrams: "SCHOOLING", Nairobi
Telephone: Nairobi 020 2453699
Email: rdenairobi@gmail.com
cdenairobi@gmail.com

When replying please quote

REGIONAL DIRECTOR OF EDUCATION
NAIROBI REGION
NYAYO HOUSE
P.O. Box 74629 – 00200
NAIROBI

Ref: RDE/NRB/RESEARCH/1/65 Vol.1

Date: 20th April, 2022

Cyprien Kamengwa Nkoma
Catholic University of Eastern Africa

Forwarded

RE: RESEARCH AUTHORIZATION

We are in receipt of a letter from the National Commission for Science, Technology and Innovation regarding research authorization in Nairobi County on the topic: *"Mobile phone dependency and psychological wellbeing of students in selected Secondary Schools"*.

This office has no objection and authority is hereby granted for a period, ending 18th April, 2023 as indicated in the request letter.

Upon completion, you are advised to share your research findings with this and other relevant offices.

SALOME WENYAA (RDQAS)
FOR: REGIONAL DIRECTOR OF EDUCATION
NAIROBI.

REGIONAL DIRECTOR OF EDUCATION
NAIROBI
20 APR 2022
MINISTRY OF EDUCATION
P.O. Box 74629, NAIROBI

APPENDIX XI: Authorization Letter From The County Commissioner

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

R. I No: 256838

Date of Issue: 18/April/2022

RESEARCH LICENSE

SUB COUNTY DIRECTOR OF EDUCATION KIBRA SUB COUNTY

Sign:

P. O. BOX 13736-00800 NAIROBI

This is to Certify that Mrs. CYPRIEN KAMINGWA NKOMA of Catholic University of Eastern Africa, has been licensed to conduct research in Nairobi on the topic: MOBILE PHONE DEPENDENCY AND PSYCHOLOGICAL WELL-BEING OF STUDENTS IN SELECTED SECONDARY SCHOOLS IN NAIROBI COUNTY KENYA for the period ending : 18/April/2023.

License No: NACOSTI/P/22/16878

256838

Applicant Identification Number

20/4/2022

RECOMMEND

COUNTY COMMISSIONER
NAIROBI COUNTY
P. O. Box 30124-00100, NBI
TEL: 341666

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.

APPENDIX XII: AUTHORIZATION LETTER FROM NAIROBI CITY COUNTY

NAIROBI CITY COUNTY

Telegraphic Address
Email info@nairobi.go.ke
Web: nairobicity.go.ke

City Hall Annex
P.O. Box 30076 GPO - 00100
NAIROBI, KENYA

EDUCATION, SOCIAL SERVICES AND GENDER SUB SECTOR

Ref : GI/NC/141 VOL. VII/18

24th April, 2022

Approved 26/4/22

Cyprien Kanengwa Nkoma
Catholic University of East Africa
P .O. Box 74629 - 00200
Nairobi

Kindly afford him the necessary assistance

RE : RESEARCH AUTHORIZATION

Following your application to carry out research and subsequent approval by National Commission for Science Technology and Innovation vide letter Ref: NACOSTI/P22/16878 dated 18TH April, 2022 s per your letter dated 20/04/2022 and letter reference RDE/NRB/RESEARCH/1/65 VOL1,

I am pleased to inform you that authority has been granted to you to carry out research on research on: "Mobile phone dependency and psychological wellbeing of students In selected Secondary Schools"

On conclusion of the study, you are expected to submit a copy of the research findings to the undersigned.

22 APR 2022

RAPHAEL KINYUNGU
FOR: COUNTY CHIEF OFFICER – EDUCATION, SOCIAL SERVICES AND GENDER

"The City of Choice to Invest, Work and Live in"

APPENDIX XIII: Plagiarism Report

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA
INFORMATION SYSTEMS LIBRARIAN
TURNITIN ORIGINALITY REPORT

REF: PGS/FASS/01/LANGATA,

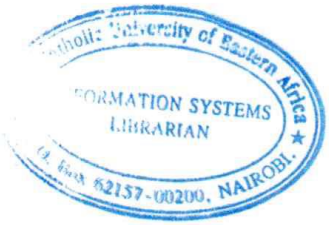
Turnitin Originality Report

Processed on: 12-Jul-2022 11:17 EAT
ID: 1869571845
Word Count: 34959
Submitted: 1

MOBILE PHONE DEPENDENCY AND PSYCHOLOGICAL WEL... By Cyprien Nkoma Kamengwa

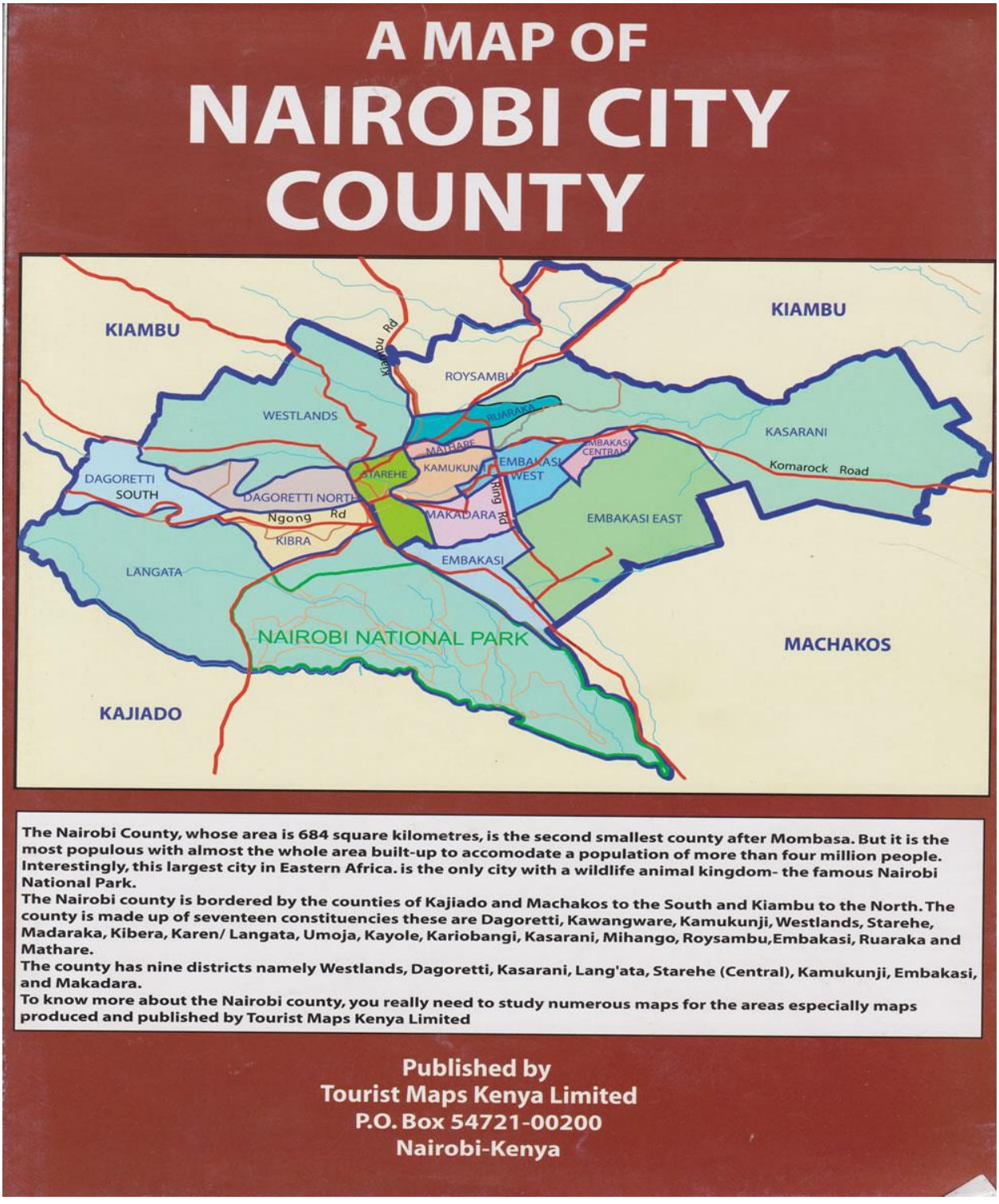
Similarity Index	Similarity by Source	
8%	Internet Sources:	7%
	Publications:	3%
	Student Papers:	3%

I HEREBY CONFIRM THAT **CYPRIEN NKOMA KAMENGWA** REG NO: **1040043,** SUBMITTED A CHECK OF ANTIPLAGIARISM ON CRITICAL EVALUATION OF **MOBILE PHONE DEPENDENCY AND PSYCHOLOGICAL WELLBEING OF STUDENTS IN SELECTED SECONDARY SCHOOLS IN NAIROBI COUNTY-KENYA,** A THESIS **SUBMITTED TO THE FACULTY OF ARTS AND SOCIAL SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE MASTER OF ARTS DEGREE IN COUNSELING PSYCHOLOGY AT THE CATHOLIC UNIVERSITY OF EASTERN AFRICA.**



Verification by Systems Librarian:

Name: HARUN MWANGI ..... Signature: HM ..... Date: 12/07/2022

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA (CUEA) P.O. BOX 62157 00200 Nairobi – KENYA
Tel: 020-2525811-5, 8890023-4, Fax: 8891084, Email: antiplagiarism@cuea.edu Website: www.cuea.edu
Founded in 1984 by AMECEA (Association of the Member Episcopal Conferences in Eastern Africa)

APPENDIX XIV: MAP OF NAIROBI COUNTY