

**RELATIONSHIP BETWEEN SOCIAL MEDIA USE AND LEVEL OF
DEPRESSION AMONG UNIVERSITY STUDENTS IN NAIROBI COUNTY,
KENYA**

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DECLARATION

This project is my original work and has never been submitted for a degree in any other institution or for any other award.

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This research project has been submitted with my approval as University Supervisor.

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DEDICATION

To my father David Kinyua Kabari and mother Catherine Muthoni Kinyua for always believing in my potential and being my constant support system. May God bless you abundantly.

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ABBREVIATIONS AND ACRONYMS

CBT:	Cognitive Behavioral Therapy
ICT:	Information and Communication Technology
KNBS:	Kenya National Bureau of Statistics
MDD:	Major Depressive Disorder
NACOSTI:	National Commission for Science, Technology and Innovation
SCT:	Social Cognitive Theory
SPSS:	Statistical Package for Social Sciences
UNICEF:	United Nations Children's Fund
USA:	United States of America
WHO:	World Health Organization

OPERATIONAL DEFINITION OF TERMS

- Depression:** Will refer to a common and serious psychiatric disorder that adversely influences how one feels thinks and how they act. It is also, in many cases referred to as a mood disorder and results in feeling sad and also leads to loss of interest in things once loved.
- Social media:** Will include a collection of virtual communication methods focused on community-based participation, interaction, sharing information and association such as Facebook, Twitter, WhatsApp and LinkedIn
- Social media use:** Will refer to sending and receiving information through social media sites for various reasons.
- Forms of social media:** Are digital channels used to pass information between individuals or groups. Some of the most common social media forms include; social networking sites (Facebook, Twitter, WhatsApp and LinkedIn), image sending and receiving apps (Instagram, Snapchat and Imgur) and video hosting sites (Youtube and Vimeo).
- Functions of social media:** The purpose with which social media is utilized by students. Communication, socializing, sharing academic information and entertainment are among the major functions of social media for University students.

Pathological social media use: A pathological behavior is an extreme deviation from a healthy or normal way of behaving. Pathological media use is an excessive or extreme utilization of social media platforms or it can also be described as a dependence to social networking.

Frequency of social media use: Frequency is the degree at which something takes place over a specific time or in a given population. Frequency of social media consumption is the rate at which individuals utilize social media.

ABSTRACT

Social media use has increased tremendously, with an estimated 3.5 billion users globally. A significant number of that population comprise University students. Depression has also been on the increase among the young people and especially University population; and while researchers have explored many causes of depression, the correlation between social media use and depression has not been adequately addressed. This study sought to find out the relationship between social media use and level of depression among university students in Nairobi County, Kenya. The investigation was founded on the theory of planned behavior by Icek Ajzen (1985) and Albert Ellis Cognitive theory of depression (1957). A correlational research approach was utilized to guide the investigation. 196,718 students from Nairobi County's public and private universities were the study's target group. A sample size of 383 participants was selected to take part in this investigation. Proportionate sampling method, stratified random sampling, and Simple random sampling were sampling methods used to get the sample. A pilot study was conducted among 38 students from Jomo Kenyatta University of Agriculture and Technology. Data on social media use and depression was gathered using a structured questionnaire. Descriptive statistics were utilized to investigate demographic characteristics, while Spearman Rank order correlation coefficient was employed to test the hypotheses. The results indicated that 54% of the students experienced moderate frequency of social media utilization. The findings further established that 76% of the university students had a mild level of depression. A significant relationship was found between frequency of social media use and level of depression. A significant relationship was further established between Facebook use and WhatsApp use with level of depression. A significant relationship was established between level of depression and use of social media for social function, academic function, entertainment function and informative function, $p < 0.05$. The study concluded that frequency of social media use was related to depression among students, WhatsApp and Facebook were the forms of social media that were highly correlated with depression among students, students experienced mild levels of depression, and there was a positive relationship between social media usage and level of depression. The research recommends that the government should put in place relevant mental health policies targeting social media platforms, university administrations to have mental health clinics to help students with depression and the students should take it as their mandates to control their social media use.

CHAPTER ONE

1.0 Introduction

This part contains an overview of the study's background, problem statement, purpose, objectives, study questions, research hypotheses, importance, justification, and assumptions.

1.1 Background to the Study

Social media is described as electronic communication like the websites used to social network and microblog via which individuals establish virtual communities to pass information, ideas and personal messages among other things (Smith & Anderson 2018). Social media is used globally, which makes the world a small village. The global digital overview as of January 31, 2019, indicates that individuals using social media globally had reached 3.5 billion at the start of the year 2019. The review further established that the number of new social media users grew with 288 million people in the last 12 months, making the worldwide social media use access rise to 45% (Hootsuite & We Are Social, 2019).

Statistics indicate that in the United States (U.S.) digital consumers spend about 2.5 hours socializing online and chatting every day, with 69% of the adult population using more than one social media site. The data show that an average American internet user owns 7.1 social media accounts. Additionally, 88% of the American social media users are young people 18 to 29 years, while 51% of the youth aged 18 to 24 years stated that it is tough for them to survive minus the utilization social media. These data indicate that there is rampant

use of social media amongst youngsters and especially those in the universities and colleges according to the age brackets.

Hussain (2012), in his study involving Islamia University students in Pakistan, established that out of the 600 students who took part in the investigation, 90% of them utilized social media diversely. Exchanging academic materials and connecting with friends topped the list for the uses. Dahlstrom, Grunwald, de Boor, and Vockley (2011), argued that Facebook was the social media site majorly utilized by undergraduates. The research engaged three thousand undergraduates and discovered that 90% of the respondents used Facebook. Facebook recognition among the undergraduates was additionally established in a 2015 survey in the U.K which revealed that 85% of undergraduates utilized the social media apps (Parr, 2015).

Matara (2017) did an investigation in Kenyan universities and established that many students highly consume social media. Matara (2017) listed the first ten universities that led in social media utilization in Kenya. The University of Nairobi topped the list with 30.7 thousand social media users, Mt. Kenya University second with 30.3 thousand, Kenyatta University 24.4 thousand, Strathmore University 19.1 thousand, United States International University 12.1 thousand, JKUAT 10.8 thousand, Zetech University had 4.4 thousand, St. Pauls University 3.9 thousand, KCA University 3.7 thousand, Maseno University 3.5 thousand, Egerton University 2.9 thousand and lastly and Moi University with 2.8 thousand followers. Ogaji, Okoyeukwu, Wanjiku, Osiro, and Ogutu (2017) in their exploration on patterns of social media consumption among pharmaceutical

undergraduates of Kenyatta University, revealed that students used less than 30 minutes on Facebook and twitter daily and also confessed that they spent most of their leisure on WhatsApp and YouTube. WhatsApp stood out as the utmost common and most used application by students to connect with their true friends and even share academic information through groups. These statistics indicated that social media consumption is high among university scholars thus the essentiality of establishing whether these high rates of social networks consumption are in anyway interconnected to levels of depression among university students in Nairobi County.

One of the many dangers that different researches have recently focused on is depression. Depression is among the major mental illnesses globally today. Worldwide, above three million individuals, including young and old are depressed (WHO, 2018). Major depressive disorder (MDD) is primarily a contributor to disability globally. In the U.S. for individuals aged 15 to 44 years. The above 16.1 million Americans are affected by MDD; the number represents about 6.7% of the U.S. population each year (WHO, 2018). According to WHO (2017) the liability of depressive disorders in Africa was majorly reported among Nigerians, where more than 7 million individuals were affected. In second place was Ethiopia with four million, third place was the DRC, where 2.8 million people are affected. South Africa and Kenya had 2.4 million and 1.9 million correspondingly. These statistics reveal that depression is rampant globally, the high levels of depression in the world exists among university students. It is important however, to review specific levels of depression among university students.

A significant number of researchers agree that depression is a great concern among university students across the globe. Wahed and Hassan (2017) did a survey among 442 students of Fayoum University and found that 60.8% of these students experienced depression. A meta-analytic study in the U.S.A revealed that 27.2% of university students were depressed. Kulsoom and Afsar (2015) found high levels of depression among medical learners in a survey conducted amid 575 students from the Alfaisal University Saudi Arabia. Peltzer et al. (2013), in a cross-sectional analysis among the undergraduates of Obafemi Awolowo University in Nigeria, found that undergraduates suffered severe to moderate levels of depression. Othieno et al. (2014) did an investigation among students of the UON in Kenya and discovered high levels of depression among first year students, married couples, the financially disadvantaged and the students living outside the university. Studies reviewed in this section have revealed that university students experience moderate to high levels of depression. Having established that depression exists among university scholars, it is necessary to figure out the effects of depression among this population.

Studies reveal that depression affects the students' mental and academic performance. For instance, Tahir, Ahmed, Batool, Ishfaq, Zaman, and Minaz (2021) evaluated the effects of depression among university 320 university learners in Pakistan and found that depression affected students learning abilities. Bisson (2017) looked at the impact of anxiety and depression on students' academic progress in another study at the Abilene Christian University (ACU) and found that depression lowered students' academic performance. Additionally, Wanyoike (2015) did a study in Kenya that indicated that depression was a

leading contributor of suicide among campus scholars, the study revealed that depression covered 39% of the causes of suicide in universities.

The above studies show that existence of depression among university students is dangerous and negatively effects their overall wellbeing and academic performance. It is good therefore to have measures that can be used to mitigate depression among students. However, before the mitigations can be put in place, there is need to understand all the cause of depression among students. Because it aims to determine whether there is a connection between social media use and depression levels, this study is therefore crucial. The study will first review what past researchers have investigated in regards to this topic. Jelenchick, Eickhoff, and Moreno (2013) did an investigation at the Wisconsin-Madison that measured the link between socializing online and depression among undergraduates. The outcome revealed no significant link between online socialization and clinical depression. Woods and Scott (2016) of the University of Glasgow UK studied how social media utilization affected sleep value, self-esteem, anxiety, and depression among Scottish students. The research discovered that students using social media frequently throughout and at night and the ones who invested emotions in social media slept less, lowered self-esteem and elevated amount of anxiety and depression.

On the contrary, an investigation by Lin et al. (2016) in the U.S., which examined whether social media consumption among the U.S. grownups led to depression, found a positive relationship between the two. According to the researchers, high consumption of social media meant high level of depression. The above-stated outcome indicates that high

consumption of social media results in depression. However, these studies have been conducted internationally, past researchers regionally and locally have greatly focused on examining consumption of social media in relation to other factors and not depression.

This section presents investigations done in Africa and Kenya to show that they have focused on studying social media use against other variables amid university students and not on the relationship between social platforms utilization and depression. Kaufman et al. (2014) did an evaluation in South Africa and discovered that social networking in youngsters lead to increased risk of sexual behaviors and alcohol use. Njoroge (2013) did a survey among Kenyan university scholars and found that they utilized social media largely for several functions. As per the findings on how social media impacts on the young people's behavior, Njoroge (2013) documented that it led to time wastage, makes an individual lazy and exposes people to unintended information. Additionally, Chris (2015) interviewed Kenyan university students to comprehend how social media usage impact on study habits. Many respondents revealed that they spent quality time on social media sites, particularly Facebook, WhatsApp and twitter even during lecture hours. Chris's findings indicated that online socialization among learners could impact negatively on students' study behavior and academic progress. Past studies from the Africa region and Kenya have shown that studies addressing the correlation between social network use and depression are scarce amongst university learners. Studies in this region have examined social media consumption among college scholars against other variables and not depression.

This study is therefore important to cover this gap since literature has shown high consumption of social media and high levels of depression among university scholars in Kenya. It is therefore necessary to measure if the two are connected since currently there is increased usage of online interaction among undergraduates and also increasing levels of depression. Knowing if there is a relationship between the two, it can become a basis of further cause and effect studies and consequently establishing measures to control social media use in a way that will eventually reduce rates of depression in this population.

1.2 Statement of the Problem

Statistics indicate that up to 3.5 billion persons globally engage in online networking (Hootsuite & We Are Social, 2019). Majority of this number of people using social media are young people. Literature revealed that particularly, young people in the universities have high levels of social media use (Hussain, 2012; Dahlstrom et al., 2011; Parr, 2015; Matara, 2017). Additionally, literature review discovered moderate to high levels of depression among university students across the globe (Wahed & Hassan, 2017; Kulsoom & Afsar, 2015; Peltzer et al., 2013; Othieno et al., 2014). The investigator intended to measure if the high levels of social media utilization among university students was related to high levels of depression and therefore reviewed literature in this regard.

Literature showed that researchers have greatly investigated the social networks consumption in university students against many variables. Studies reviewed illustrated that several surveys have been conducted internationally on the connection between social networks utilization and depression among university students and the studies found a significant relationship (Jelenchick et al., 2013; Woods & Scott, 2016; Lin et al., 2016). The review of literature additionally showed that though the aspect of social media use

among university students has greatly been investigated in the African region, Kenya included, it has been investigated against other variables and not depression. The studies found in African region investigated the social network usage among college learners against variable like; sexuality and alcohol use (Kaufman et al., 2014), time wastage and productivity (Njoroge, 2013) and impacts in study (Chris 2015), among other factors.

With the observed high increase in social media utilization and also elevating levels of depression among undergraduate, it is vital to figure out if the social media utilization is correlated to depression among this population. This understanding can help in decision making on interventions to control depression among university students. It is essential for universities to come up measures to mitigate depression among students because evidence show that existence of depression among university students is dangerous because it has it negatively effects their overall wellbeing and academic performance (Tahir et al., 2021; Bisson, 2017; Wanyoike, 2015). However, before the mitigations can be put in place, there is need to understand the causes of depression among students. If this investigation reveals that the utilization of social media results in depression, it will help university policy makers on deciding how social media consumption can be controlled in order to manage depression among students.

This study is significant because it will fill a research gap by examining the relationship between social media use and levels of depression among university students in Nairobi County. The literature has shown that there are few studies in Kenya looking at the relationship between social media use and depression among university students.

1.3 Purpose of the Study

Establishing a correlation relating to use of social media and depression levels amongst university learners in Nairobi County, Kenya, was the main objective of this study.

1.4 Objectives of the Study

The following objectives guided the study:

- i. To determine the relationship between frequency of social media use and level of depression among university students in Nairobi County.
- ii. To establish the relationship between forms of social media use and level of depression among university students in Nairobi County.
- iii. To establish the relationship between functions of social media use and level of depression among university students in Nairobi County.
- iv. To find out strategies on social media use that can be put in place towards mitigating levels of depression

1.5 Hypotheses of the Study

The investigation was based on the hypotheses below

- i. H₀1: There is no statistically significant relationship between frequency of social media use and level of depression among university students in Nairobi County

- ii. H₀₂: There is no statistically significant relationship between forms of social media use and level of depression among university students in Nairobi County
- iii. H₀₃: There is no statistically significant relationship between functions of social media use and level of depression among university students in Nairobi County

1.6 Research Questions

The investigation was based on the following research question:

- i. Which strategies on social media use that can be put in place towards mitigating levels of depression?

1.7 Justification and Significance

With increase in technology and social media applications coming up regularly, young people have turned into social media interactions as compared to one-on-one communications. Many things including social meeting are now conducted online through various platforms. Almost every university student in Kenya and particularly in Nairobi County has a smart phone giving them an easy access to different social networking application. Data has shown that majority of these university students devote quality time going to social media. The world, Kenya included is also experiencing increase in levels of depression among campus learners. Literature have shown that depression affects overall wellbeing and educational success of students. Investigations done in developed countries have shown that social media use among university students causes depression, this imply that to manage depression among this population, there has to be management of social networking use. Nevertheless, there is scanty research on this matter in Kenya. It was therefore necessary to carry out the current investigation because it will provide information that can be used by university policymakers in designing interventions for

depression among this population. The findings of the study may be significant to University students by informing their behavior and patterns of social media use and strategies they can use to mitigate levels of depression.

1.8 Scope and Limitation of the Study

This study focused on Nairobi County's undergraduate university students. Therefore, the findings of this study will be inferred to university students who have comparable sociodemographic characteristics.

The study explored on the relationship between social media use and depression as opposed to any other aspect of mental health hence the results cannot be taken to represent other mental issues among students using social media.

This investigation scrutinized the relationship between social media utilization and depression on the basis of four forms of social media forms; WhatsApp, Twitter, Instagram and Facebook and therefore the findings will be in relation to these four forms of social medial platforms and no any other forms.

This study adopted a correlational study method and therefore will not establish a cause-and-effect relationship between social media utilization and level of depression. The outcome of this investigation may nevertheless form a foundation for future cause and effect studies. The researcher will endeavor to include some of the sociodemographic characteristics that may intervene in the research findings like gender and age as part of the study.

1.9 Assumptions of the Study

The following presumptions guided the study:

- i. Participants frequently access social media platforms

- ii. Participants access a variety of social media applications.
- iii. Respondents use social media for various functions
- iv. Some level of correlation exist between social media consumption and level of depression
- v. Respondents have a clue on the strategies that can be established based on social media use towards mitigating level of depression.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.0 Introduction

Previous researches on the relationship between social media use and depression is summarized in this section. The section starts with a theoretical foundation and then moves on to a review of past research that is relevant to the study objectives. The summary of the previous studies reviewed will be followed by the conceptual framework.

2.1. Theoretical Framework

This part describes Icek Ajzen (1985) theory of planned behavior (TPB) and Albert Ellis' (1957) cognitive theory of depression as theoretical frameworks for the basis of this study.

2.1.1 Theory of Planned Behavior (TPB)

This model was established by Icek Ajzen (1985) as a basic approach to envisage and describe behaviors in diverse ways. TPB is used to figure out persons' intent to act in a particular manner. The approach was meant to illustrate all deeds over which individuals have the capability to exercise self-control (Ajzen, 1985). The primary construct of this approach is behavioral intent; which are determined by the perception about the possibility that an act produces a wanted outcome and the subjective valuation of the dangers and benefits of the behavior outcome.

The TPB has been utilized effectively to determine and describe diverse range of health actions and intents such as smoking, drinking, acquiring healthcare, breastfeeding, and drug abuse, among others. The TPB argues that to successfully achieve an action, both intentions and ability to execute the behavior are necessary. The TPB is comprised of six

components; attitudes, behavioral intention, subjective norms, Perceived behavioral control, Perceived power, and social norms (Ajzen, 1991). Attitudes refer to an extent at which an individual has a positive or negative appraisal of the behavior desired. Behavioral intent is the inspiration that fuels the desired action. The subjective norms question whether other people or society approve or disagree with one's conduct. Social norms refer to the accustomed ways of conduct in a sect of persons or in the bigger society (Ajzen, 1991). Perceived power is the expected existence of aspects that can may enable or hinder an action. And lastly, the perceived behavioral control is person's notion of the easiness or strain in acting a desired behavior.

This model is suitable for the current investigation because it majors on three main factors for a behavior to happen, the intention, the motivation and the expected outcome. Social networking among university students is an intentional. The student's intent to sue the social media is motivated by the desire among the student to get connected with their peers while staying informed of the latest happenings. Further, the use of social media by students in universities is also fueled by the desired or expected outcome. This theory forms the basis for understanding why many students are currently using social media platforms.

The expected outcome to influence behavior can explain why social media use might leave students depressed. This theory states that individuals act in a certain way because they expect good outcome. If the desired outcome is not achieved one might be depressed. For instance, if a student posits a photo online and does not receive the desired comments or likes, the might begin to question their looks and if this happens repeatedly, it can cause depression.

2.1.2 Albert Ellis' Cognitive Theory of Depression

Around the 1950's, a psychologist by the name Albert Ellis together with a psychiatrist called Aaron Beck, independently established two very close theories. The approaches led in a successful formation of cognitive therapy. According to cognitive theory, individual dysfunctional thinking can result in extreme emotions. These emotions hence result in maladaptive behaviors (Beck, 2018). Albert Ellis would then document the cognitive approach of depression. Dr. Albert Ellis stated that the unreasonable philosophies of persons with depression in most cases can occur like absolute statements. Ellis documented three core views distinctive for depressive thoughts; "I have to be totally perfect, or I am not worthy." "Other people should treat me right, or others are bad to me." "The universe should all the time make me happy, or I should not live." Due to those kind thoughts, individuals with depression n become demanding on other people or persuade themselves that they contain irresistible demands that by all means should be fulfilled. Ellis called these tendencies to want absolutism in depressive thoughts as "Musterbation"(Ellis, 1957). Ellis additionally revealed the existence of information interpretation discrimination in the cognitions of these individuals. Ellis stated that persons with depression are likely to disregard positivity in anything and give more attention to negativity in everything. Additionally, they involve a lot in overgeneralization. Overgeneralization comes in where individuals suppose that just because a single thing came out wrongly, that this definitely indicates that other things will be wrong (Ellis, 1987). For instance, persons with depression might not acknowledge that they at least have a few close people around them, or they did something good if even once in a lifetime (ignoring the positive). They can also exaggerate the pains they went through in the past. Another group of these individuals with

depression might persuade themselves that no one cares or loves them and will all the time do things in the wrong way (Held & Pollack, 2019). This theory fits into the study because social media creates a flat form for individuals with depressive tendencies to keep looking at what others have done with their lives. These individuals therefore, keep comparing themselves with others and feeling that they have not yet achieved anything with their lives. Social media additionally continues to remind people of how perfect lives should look like in terms of finances, education, dressing and family among others. Anyone who has not achieved what social media expects tends to feel less of a person. The inferiority feeling is dangerous for persons with depressive signs.

2.2 Review of Related Literature

This part outlines an evaluation of past research on the connection between social media utilization and level of depression in relation to the research objectives.

2.2.1 Relationship between Frequency of Social Media Use and Level of Depression

Hunt, Marx, Lipson, and Young (2018), did a survey among 143 undergraduate university students of Pennsylvania. The researchers gauged the connection between limiting social media consumption and depression. The researchers engaged the research group and a control group where they limited the utilization of Facebook, Instagram, and Snapchat for ten minutes respectively. The respondents, therefore, had their total social media use time reduced with thirty minutes in a day while the control group used the sites as before. The researchers collected data for about twenty-one days, and the outcome revealed that the group with less usage had momentous declines in seclusion and depression over the observed period in comparison to the control set. This study illustrates that frequency of students' social media consumption influences their levels of depression, this test reduced

time of use among the experiment group which later reported reduced levels of depression. This study creates a base for present study by revealing that control of social media use can be adopted to manage depression among university learners.

Woods and Scott (2016) examined how social media usage affects students' sleep value, anxiety, depression, and self-esteem. The outcomes revealed that youngsters who utilized social media highly at night reported worse sleep worth, reduced self-confidence and elevated degree of anxiety and depression. Night particular social media consumption was found to cause reduced sleep value after regulating for anxiety, depression, and self-esteem. This study informs the current study by showing that time spent of social media influences the rates of depression among university scholars. The outcome of this survey gives the investigator of the present investigation the affirmation to explore whether the same is the case for university students in Nairobi County.

Demirci, Akgönül and Akpınar (2015) explored the connection between the severity of mobile usage and quality sleep, depression, and anxiety among university scholars in Turkey. The exploration discovered that depression, anxiety, and daytime inability to function rates were more in the high Smartphone consumers as compared to reduced mobile phone utilization. Also, significant relationships were indicated between mobile phone dependence Scale rates and depression rates, anxiety intensities, and insomnia rates. This study indicates that frequency of using phones influences the level of depression however, though this study is informative to this study, it did not specifically state whether the smartphone use was used on social media or for other purpose.

Alsabaani, Alshahrani, Abukaftah and Abdullah (2018) evaluated the affiliation between high consumption of social networks and depression and additionally identified other hazard elements linked to depression among clinical scholars in King Khalid University. Two hundred and thirty-nine students participated in the research and, the finding indicated that 67.4% were depressed; it was minor among 41.8% and extremely high among 9.6%. Depression was more experienced by ladies compared to male scholars (74.1% versus 63.6%). Family history issues, money issues, academic challenges, physical or psychological exploitation, psychiatric issues, and, family background of depression were considerably linked with depression and its severity among the students. However, the occurrence of depressive signs did not statistically connect with the pattern or the overuse of online content. This study unlike several surveys finds that using social media frequently does not correlate with depression, however, it is still informative for the current study because it shows the levels of depression among the students.

Adepoju, Ladipo, & Kolawole (2015), did a study examining how social media addiction and utilization impacted Undergraduate University students' self-perception from the University of Ibadan, Nigeria. The outcome of the investigation demonstrated that the commonly used social networks were; Facebook (90.2%) and Twitter (77.6%). The purposes for use were; chatting with acquaintances (651 or 78.2%), acquiring trending information (67.9%), passing messages (66.5%) and virtual studying (54.0%). The main findings established an affiliation between the reduced degree of social media dependence and positive self-efficacy. Self-confidence was considerably positively linked to social media utilization and social media dependence. Social media consumption and social

media dependence relatively contributed to self-confidence. Utilization of social media and overuse comparatively led notably to the University of Ibadan undergraduates' self-perception. This study however did not compare social media use with depression but compared it with self-perception, however this study informs the current investigation because it has shown the extent at which undergraduates engage in different social platforms and this information is important for the current investigation.

Ogachi, Karega, and Oteyo (2019) inspected the affiliation between depression and pathological internet usage (PIU) among Kenyan undergraduates. The scholars determined the relationship between the variables using a correlational design. The study engaged 400 undergraduates from a public university and a private university. The outcome of the assessment indicated occurrences of 16.8% of PIU and an occurrence of 23.6% of depression. This is the only study in Kenya that touches on the frequency of internet use and depression among undergraduate. The study reveals that high usage of internet among university students leads to depression. This study links internet use with depression but it does not specify whether it however does not indicate whether social media is among the purposes undergraduates use internet for.

2.2.2 Relationship between Forms of Social Media Use and Level of Depression

An investigation by Simoncic, Kuhlman, Vargas, Houchins, and Lopez-Duran (2014) explored the link amongst using Facebook and depressive signs and personal aspects such as personality and gender among youth in Michigan USA. The scholars tested Facebook usage, depressive symptoms, and personality aspects (e.g., the extroversion and neuroticism) among two thirty-seven youths. The findings indicated no significant

association amongst Facebook use and depressive symptoms. On the other hand, ladies with increased neuroticism and high Facebook usage correlated with reduced depressive signs. The outcome suggested a complicated connection between Facebook consumption and depressive. The study concluded that Facebook utilization might shield individuals against depressive symptoms. This study informs the current study on the fact that Facebook is amid the leading social applications consumed by university learners. This study found that Facebook can actually be used to prevent depression, the current study will also review the forms of social media platforms used by Nairobi County university students.

Datu, Valdez, and Datu (2012) investigated the connection between using Facebook and depression in Filipino adolescents. The scholars recruited 200 undergraduates aged between 17 and 20, from a private and sectarian educational institute. The researchers used the Goldberg Depression Scale (GDS) and assessed how much time students spent on Facebook weekly. The scholars found no substantial link between participants' level of depression and Facebook usage. Hence, the researchers were not able to sufficiently link depression to the use of Facebook.

Sitota, Misganaw, and Tarekegn (2017), investigating the connection between university learners' Facebook consumption and their emotional adaptation at Haramaya University, Ethiopia, the investigation engaged a sample of 351. The outcome revealed that students who utilized Facebook had a substantial rates of Facebook consumption and additionally had a significant degree of perceived emotional adaptation. 31.79% of the scholars used

Facebook for recognition: looking for or gaining facts at 23.5%: enhancing connections with relatives, acquaintances and other kinds of socialization. 18.89% reported using Facebook for of them used for distraction: entertainment, recreation, and escape from loneliness and negative emotions. The findings did not find any statistically substantial emotional adaptation variations between Facebook consumers and non-consumers and between both genders. This study shows that students use Facebook but relate it with emotional adaptation and not depression and creates a study gap for the current study.

Muia (2016) examined the impact of social media on misbehavior among high school students in the Langata sub-county. The investigation gathered data on four significant forms of sites consumed by the learners WhatsApp, Twitter, Instagram, and Facebook. The main objectives looked at how social media use influenced; drug abuse, risky sexual behavior, violence, and cyberbullying. The results revealed that social media highly impacts on the sexual behaviors of secondary school students. Further results discovered that students reported an affiliation between social media and violence among respondents in addition to drug abuse as a result of peer pressure. The findings also strongly agreed that social media usage raised cases of molestation and cyberbullying. This study was conducted in Kenya and therefore it does show that the aspect of social media in Kenya has been greatly investigated but in relation to other variables and not depression. Additionally, the survey was executed in secondary schools whereas the present investigation will be done among university students. By examining the types of social media used by university students and their relationship to depression, this study aims to fill these gaps.

2.2.3 Relationship between Functions of Social Media Use and Level of Depression

Longest and Kang (2022) surveyed how emotional wellness among youngsters during COVID-19 inspired the use of online interactions, social support from social networking, and their impact on the mental wellness during the pandemic season. The results showed that ladies and those unemployed or those that lost their jobs during the COVID-19 went through increased levels of depression. The findings revealed that the intention to acquire informational through the social media was significantly related with depression, and increased levels of virtual support resulted in high levels of depressive symptoms. Additionally, youngsters reported reduced rates of depressive signs when they experienced increased rates of offline psychological care and a lower rate of virtual social support. This study reveals that utilizing the online platforms to acquire information influenced the rates of depression depending to the information acquired there can be increased or reduced levels of depression. However, this survey engaged the general population while the present investigation targets the university students.

Park and Lee (2012) explored the link among intentions of android usage, social connections, and emotional health among Korean college learners. The correlation scrutiny indicated that the intention of smartphone usage was substantially linked with socialization. The findings revealed that a desire to care for other people was adversely linked to isolation and depression. Additionally, the results showed that attachment and online connections and social support notably reduced isolation and depression. This study has shown that utilizing social networks as a mode of connection with others can influence depression,

this study is informative to the present investigation because it was conducted among college students which is the population of study for the current research.

Gakinya and Kâ (2015) did a study in Kenya at the Mount Kenya University on the connection between social media consumption and self-confidence. The researchers engaged 365 students who stated using different forms of social media platforms to create and maintain relationships, through chatting, commenting, posting, and liking of friend's posts. The outcome indicated that using social media can lead to improved and destroyed self-confidence. Additionally, of the level of self-esteem was found to be determined by the kind of feedback (positive or negative) the users get from their peers and how they interpret and perceive the feedback. This research done in Kenya shows that social media use influence students wellbeing, however, this study examined social media use against self-confidence and not depression which is the variable of this study. The investigation was also carried out in one of institutions of higher university in Nairobi and so the outcome may not be generalized to all universities in Nairobi while the current study has an advantage because it will be carried out among various universities in Nairobi.

2.2.4 Social Media Strategies that can be put in place towards reducing level of Depression

Depression onsets between adolescence and young adulthood, a stage where individuals are trying to build their identity. Many persons in this developmental stage find it very difficult to seek mental health care because of various barriers such as stigma, cost, confidentiality, and limited information on the services. Social media has developed into a channel people use to express their feelings, whether stress, frustrations, or anger that can

lead to depression (Rice et al. 2014). Ridout and Campbell (2018) examined the usage of social networking sites in psychological health interventions among the youth. The findings indicated that youngsters reported social networking sites-based intervention accessible, usable, engaging, and supportive. The intervention also increased mental health knowledge among the users.

Additionally, social networking sites usage was found to reduce depression though there was no clear indication that it reduced other mental illnesses like psychosis (Ridout & Campbell 2018). Dedy et al. (2016) evaluated the practicality and the efficiency of an automatic web-based self-help method in managing repetitive signs of depression and dependence liquor consumption in the youth. The findings showed a significant statistical reduction in signs of depression and liquor utilization outcomes in youth.

Peer and social support are some of the ways individuals use to deal with loneliness and challenges that come with mental illnesses. Naslund et al. (2014) investigated whether peer and social support through social media platforms helped people dealing with psychiatric conditions. The scholars' analyzed 3044 comments and 19 videos posted by individuals found to have schizophrenia, schizoaffective, and bipolar disorders. The findings indicated that social media support minimized isolation and provided hope. Individuals also indicated finding information through shared experiences of how other people have utilized medicines and search for psychological health services.

Drouin et al. (2018) examined the scholars' social support bases, in addition to social media sources and their inclinations for social media elements. Six hundred and sixty-two

university students who passed a demographic survey and depression/anxiety screener were picked to take part in the research. The respondents were further required to specify if they talked to people or posted on social media whenever in stress. The outcome revealed that learners with increased depressive symptoms rarely identified relatives and psychologists their main sources of support. Learners with elevated levels of depression/anxiety had a high probability of consuming social media as their main source of support. The scholars determined that social media may act as a factor to reduce stress while on the other hand it can act as a stress causing agent.

Välimäki et al. (2016) did a meta-analytic survey of the helpfulness of social networking intercessions for persons with schizophrenia. The selected respondents were individuals with schizophrenia or an affective disorder. It was revealed that social media was adopted as a Web-based psychoeducation and also as a source of virtual peer sharing. The outcome of the investigation showed that at three months, respondents with schizophrenia in the treatment group revealed experiencing reduced distress levels and indicated a tendency for an increased perceived rate of social support. Besides those who experienced positive views with the peer support group also revealed increased rates of emotional disturbance.

Jimenez et al. (2014) compiled and analyzed existing literature on the suitability, practicability, wellbeing, and the importance of online and phone-based interventions for mental illness. The researchers included 12 peer-reviewed articles. The interventions were web-based psychoeducation and regulated programs for clients and supporters; incorporated web-based rehabilitation, social interactions, and peer and professional

moderation; individualized guidance on the basis of medical evaluations; and chatting approaches. The outcome revealed that 74–86% of individuals utilized the web-based rehabilitation methods proficiently, and 75–92% viewed them as significant. The findings showed that virtual and mobile-based approaches indicated potential in enhancing positive psychotic indications.

A survey carried out by UNICEF (2013) assessed how the use of social impacts on the lives of Kenyan adolescents in terms of private and public space. The respondents in the study agreed using social media widely to chat, access audio/video content, play games, and search for information on subjects like sporting, entertaining, fashion, courting and love lives and educational topics, and gossip. The response indicated that social media use helped them to establish their private lives hence enhancing confidentiality through seeking and acquiring information without being judged by society. It was also reported that social media was seen as part of self-discovery and shift to maturity. The respondents reported that digital and social networking gave them the privacy they feel they is insufficient in one-on-one interactions (UNICEF 2013).

From the literature reviewed, findings demonstrate that online socialization can be an efficient instrument for mental health interventions, incorporating depression and anxiety. However, there lacks significant regional and local studies and therefore, this study is timely in seeking to find out social media interventions that can be used to mitigate an increase in level of depression among undergraduates.

2.3 Summary of Literature Review

The literature was examined following the research objectives, the first objective studied the connection between social media engagements and depression levels. The reviewed

literature revealed that this aspect has been extensively researched, particularly in the Western world, and that literature discovered a relationship between the frequency of social media usage and depression. (Hunt et al., 2018; Woods and Scott, 2016; Demirci et al., 2015; Alsabaani et al., 2018). The literature reviewed additionally exposed the scarcity of studies investigating social media utilization frequency and depression regionally and locally. The only study found in Kenya that closely examined this connection was done by Ogachi et al., (2019) which touched on the frequency of internet use and depression among undergraduates and revealed that high usage of the internet among university students led to depression; it, however, did not indicate whether students used the internet to get to social media sites. There is therefore a need to conduct more studies on this aspect hence the necessity of the current investigation.

The second objective of the research reviewed the studies on the correlation between the use of various social media platforms and depression severity. The reviewed literature revealed that the many of researchers investigating on the forms of social media seem to center on Facebook and the good number of the studies found indicated that depression was not a consequence of Facebook use (Datu et al., 2012; Sitota et al., 2017) and in some studies, it has been found to reduce levels of depression among its users (Simoncic et al., 2014). The literature revealed a dearth of these researchers in Kenya, one of the studies found in Kenya closely related to this aspect studied the connection between several kinds of social media (WhatsApp, Twitter, Instagram, and Facebook) and drug abuse, risky sexual behavior, violence, and cyberbullying and not depression. Hence the present investigation anticipated to cover the exposed study gap.

The third objective reviewed studies on the correlation between social media functions and rates of depression. Literature reviewed revealed that college, university, and young people utilized social media for socialization or chatting, communication, offering moral support to those suffering mental illnesses, and as channels to acquire information (Reavley and Pilkington, 2014; Longest and Kang, 2022; Park and Lee, 2012; Gakinya and Kâ, 2015). On the other hand, a high number of these investigations relate the functions of social media usage with other issues rather than depression, in Kenya particularly there was no study found on functions of social media utilization and depression hence the present investigation intended to cover this study gap.

The last objective of this investigation reviewed the literature on the strategies that can be adopted control social media use towards reducing levels of depression. The literature reviewed revealed that young people reported that social networking sites-based intervention accessible, usable, engaging, and supportive (Ridout and Campbell, 2018); the literature also showed that youngsters support the utilization of social networks to show care those with psychological disorders Naslund et al. (2014), and Jimenez et al. (2014). However, there lack significant regional and local studies, and therefore, this study is timely in seeking to find out social media interventions that can be used to mitigate any increase in the level of depression among undergraduates. The current study intends cover the above study gaps.

2.4 Conceptual Framework

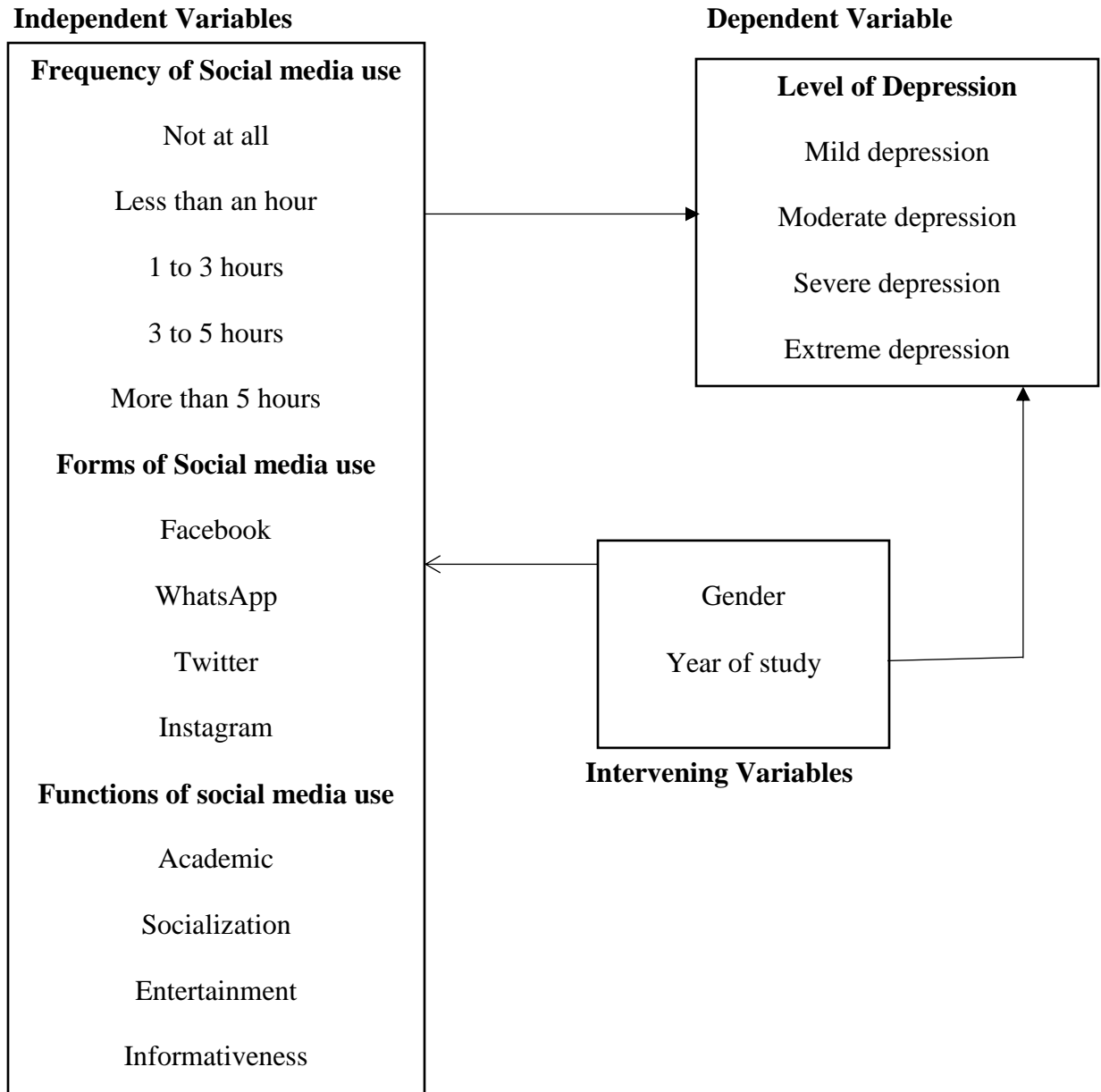


Figure 2.1 Conceptual Representation of the Relationship between Social Media use and Level of Depression

The conceptual framework in figure 2.1, outlines social media utilization as the independent variable and level of depression (mild, moderate, severe and extreme level) as the dependent variable. Social media utilization has been conceptualized in terms of

frequency (daily, weekly, less often), forms of social media consumption (Facebook, WhatsApp, Twitter and Instagram) and functions of social media consumption (academic, socialization, entertainment, and informativeness) It is postulated that the independent variable (social media usage) has a linear association with the dependent variable (Level of depression). Additionally, it is theorized that other aspects like sex, age, and level of study could influence the connection between social media utilization and level of depression.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The intended design of the study, target population and sample size, variables, study's setting, and the sampling techniques employed, study tools, study pilot, data gathering and analysis protocols, and data management and ethical considerations are all covered in this section.

3.2 Study Design

Correlational study method was employed to explore correlation between use of social media and depression levels among Nairobi County university students. The research design allowed the researcher to make necessary inferences that can be actionable in the form of suggestions for policies and further research (Simon & Goes, 2011). This research method was thus appropriate for this analysis because it allowed the investigator to investigate if there is a relationship between social media use and depression levels.

3.3 Variables of the Study

The study variables were social media use and level of depression. Social media use was the independent variable, whereas level of depression was the dependent variable. Social media use was conceptualized as frequency, forms and functions of social media use, while level of depression was conceptualized in terms of mild, moderate, severe and extreme levels, adopted from the Becks depression inventory.

3.4 Study Location

This investigation was done in Nairobi County among University students. Nairobi County was purposively selected having been ranked with the highest level of internet connection

in the country, with a connectivity rate of 28.3% (KNBS, 2014). Nairobi County was also suitable since it hosts the majority of the public and private Universities Countrywide and therefore enrolls students from a variety of socioeconomic backgrounds. This allowed the researcher to get a diverse sample size as that of the entire university population.

3.5 Target Population

This study targeted 196, 718 learners undertaking their studies in both public and private Universities situated in Nairobi County (KNBS, 2019). As per to KNBS (2016), 94.3% of learning institutions had a web presence, indicating that a high number of the students in learning institutions accessed the internet, with the survey further indicating that 100% of learning institutions were connected to social networking apps like Facebook.

Table 3.1 outline a summation of the target population.

Table 3.1

Target Population Summary by University Students

University	Population
Kenyatta	64,599
Multimedia	5292
Nairobi	70,515
Strathmore	4829
Cooperative	2868
Technical University	12115
CUEA	8000
USIU	8500
KCA	15000
Pioneer International	5000
Total	196, 718

Source (KNBS, 2019)

3.6 Sample Size calculation and Sampling strategies

The sample size was on the basis of Kathuri & Pals (1993) method of determining sample sizes.

$$n = \frac{X^2 NP (1-P)}{\sigma^2 (N - 1) + X^2 P (1 - P)}$$

Where:

n = sample size required

N = in this situation, the given population size from the sample frame is 196,718.

P = Population proportion, assumed to be 0.50

σ^2 = the extent of precision with a value of 0.05

X^2 = The value of the chi-square table for a single degree of freedom, that is 3.841.

Based on the above formula, the sample size therefore consisted of 383 students distributed among four universities purposively selected for leading in ICT infrastructure, two public and two private institutions (CPS Research, 2012).

Table 3.2 presents the summation of the sample size.

Table 3.2

Summary of the Sample Size by University Students

University	Population	Sample Size
Nairobi	70,515	187
Kenyatta	64,599	171
Multimedia	5292	14
Strathmore	4000	11
Total	144, 406	383

Multi-stage sampling technique was employed in obtaining representative data of the sample 383 respondents (Lavrakas, 2008). Proportionate sampling strategy was adopted to select representative sample size from each of the four Universities. Stratified random sampling was then utilized to guarantee that the participants are well represented in the following strata; gender and level of study. Study's participants were then chosen from each stratum using a simple random sampling method.

3.7 Research Tools

A self-reported questionnaire was used to collect the data. There were four sections to the tool. The questionnaire's Segment A researcher developed scale was employed to gather data on the participants' socio demographics, incorporating gender and level of study and data on Segment B on how often the respondents utilized use social media and what kind of social media they utilize. The social networking usage scale by Gupta and Bashir (2018) was modified on segment C to capture data on the function of social media utilization. The scale used a 5-point Likert scale (Always=5, Often=4, Sometimes=3, rarely=2 and never=1). This questionnaire was suitable for this study since it was developed and adapted to be used among university students (Gupta & Bashir, 2018).

Beck depression inventory II, which was first established by Aaron Beck in 1961, was adopted to gather information on Segment D assessing the level of depression among university students. The questionnaire uses 21 items to categorize individuals into various levels of depression from mild to extreme depression. The questionnaire was assessed on a 4-point scale (0 to 3), with greater scores signifying severe level of depression. Scores ranging between 0 to 16 demonstrated mild depression, scores extending from 17 to 30 demonstrated moderate depression, and scores extending between 31 to 40 will

demonstrated severe depression, while a score above 40 demonstrated extreme depression. This questionnaire was suitable for the study as it will enable the categorization of students into various level of depression. A self-developed tool was used to collected data on Segment E on the respondents' perceived recommendations on social media strategies for mitigating level of depression among campus learners.

3.8 Validity and Reliability of Research Tools

3.8.1 Validity

Study objectives informed the development of the questionnaire to guarantee the construct validity of the tools. In addition, the study questionnaire was assessed together with the supervisor to ensure that entire elements of social media utilization and depression were covered in the questionnaire and therefore enhance the content validity. To further enhance the construct and content validity, the researched adapted the social networking usage scale to measure social media use and adopted the Becks inventory II tool to establish the levels of depression. Both tools have been established as being valid in past studies through the use of factorial analysis (Wang & Gorenstein, 2013; Gupta & Bashir, 2018).

3.8.2 Reliability

The internal consistency strategy was employed to gauge the study tools' reliability. For a Likert scale questionnaire, the internal consistency approach of reliability was appropriate (Cronbach & Shavelson, 2004). Cronbach alpha was used to statistically confirm the tools' reliability, to establish how questions assessing the same idea associate with one another. A Cronbach coefficient of 0.7 or higher is required for an instrument to be considered reliable (Cronbach & Shavelson, 2004). Internal consistency method of assessing

reliability was suitable for the study since both the questionnaires assessing social media use and that assessing level of depression have been established to be internally consistent in previous studies (Garcia-Batista et al, 2018; Gupta & Bashir, 2018). Therefore, the current study sought to determine whether after adaptation, they are internally reliable.

Table 3.3 presents the summary of reliability findings.

Table 3.3

Internal Consistency Reliability Findings

THEME	CRONBACH ALPHA	ITEMS ON THE SCALE
Social Media Use Scale	0.934	32
Becks Depression Scale	0.937	21

From table 3.3, both scales had a Cronbach alpha score of above 0.7 and, demonstrating that the questionnaire was internally consistent and thus reliable.

3.9 Pilot Study

A pilot investigation was done among undergraduates at JKUAT University. The institution is located in Kiambu County, which is adjacent to Nairobi County and therefore the population characteristics are similar to those of the sampled institutions. The institution was also ranked among the best in terms of ICT infrastructure (CPS, 2012). The questionnaires were filled by 10% of the total sample size (n=383); thus, a total of 38 students was sampled. The outcome of the pilot investigation was scrutinized to test the reliability of the research tools and to evaluate whether the questionnaires were measuring the constructs under study. There were no difficult or unclear items. Information from piloting was not incorporated in the final analysis.

3.10 Data Collection Procedures

Approval to proceed with data collection was sought from the Graduate School Committee. As a result, the NACOSTI gave the investigator the go ahead to begin collecting data in the field. Letters of approval to collect data was presented to the heads of relevant departments in the institutions before commencing data collection. The researcher sought the assistance of the class representatives in each level of study in distributing the questionnaires to the sampled students. In order to reach out to student who were not in campus during the data collection time, the researcher uploaded the questionnaire on a google form and distributed the tool through email and WhatsApp groups with the aid of the class representative. Informed consent forms, both in paper copy and electronic format, were given to those who met the study's eligibility requirements to read and sign before agreeing to participate in it. They were then given the questionnaires to complete and offered an opportunity to ask questions or seek clarifications on any item they did not understand. The participants were given 10 to 15 minutes to fill in the questions independently, while the participants who responded online using google forms were given 30 minutes to respond to the questionnaire having given their consent. Those responding online were allowed additional time to answer the questionnaire as it took more time to navigate through the tool on google form and to ensure that all the items were adequately responded to.

3.11 Data Analysis and Presentation

This investigation produced quantitative data. The data on demographic characteristics was analyzed via descriptive statistics including frequencies and percentage distributions, mean and standard deviation. Data on social media utilization and level of depression was also

analyzed through descriptive statistics including frequencies and percentage distributions, mean and standard deviation. Spearman Rank Order correlation was utilized to test if there was a statistically significant correlation between frequency of social media usage and level of depression. Spearman Rank Order correlation was also employed to test whether statistically significant relationship existed between; forms of social media usage and level of depression. Functions of social media utilization and level of depression and level of social media utilization and level of depression were also analyzed using Spearman Rank Order correlation. Spearman Rank Order Correlation coefficient was used to test the study hypotheses since the study variables were measured in the ordinal scale (Miot, 2018). Data analysis was aided by SPSS Version 23.

3.12 Data Management and Ethical Considerations

Authorization for data collection was acquired from the relevant University authorities and involvement in the study was voluntary. The information gathered from the study was handled confidentially and was solely utilized for research purposes. The confidentiality and anonymity of the participants, as well as the data obtained during and after the study, were guaranteed by the researcher. The hardcopy questionnaires were securely kept and locked in a storage opened only by the investigator. The soft copy of the data collected online and that entered in the software for analysis was secured in the researcher's personal computer with a password only known by the investigator. The participants presenting with mild to moderate signs of depression were debriefed and offered with educational brochure on depression, while the respondents presented with severe to extreme depression were debriefed and referred to the wellness university clinics.

CHAPTER FOUR: PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Introduction

Findings of the current study analyzing the correlation between social media use and depression levels among university students in Nairobi County, Kenya, are presented in this section. Presented first are the demographic findings followed by descriptive and inferential analysis of the research outcome as per the study objectives.

4.2 Demographic features of participants

Overall, 352 students answered the study questionnaire out of the sampled 383 respondents, indicating a 92% response rate. As per Fincham (2008) a response rate of 80% or more on a survey is deemed as being a representative sample size. Sociodemographic features incorporated included; gender and year of study. The outcome is outlined in the subsections that follow.

Male and female students were included in the investigation. Figure 4.1 depicts the gender distribution of students.

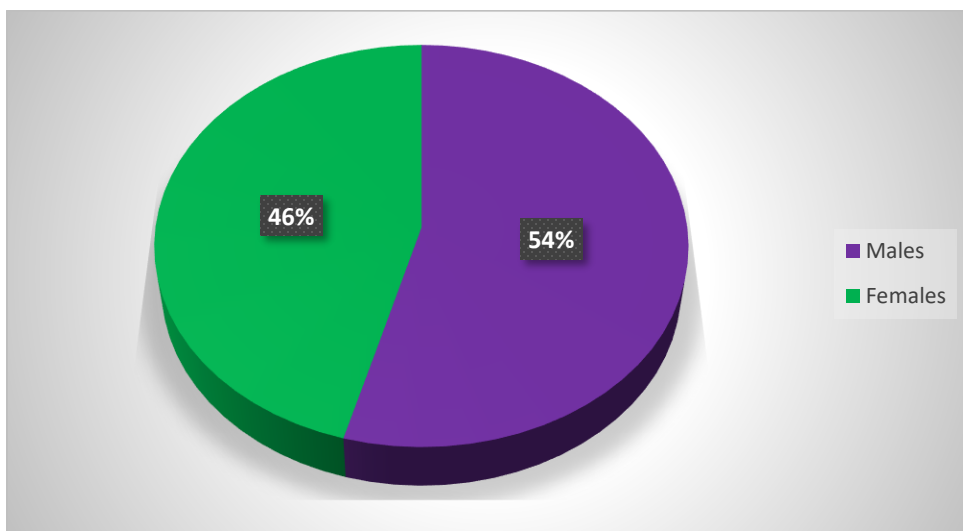


Figure 4.1 Students Gender

From figure 4.1, 54% of the students were males, while 46% were ladies. Statistics on enrollment in Kenya by Gender indicates that more males than females' students have been enrolled in Kenyan Universities over the years (Faria, 2021). The current findings on gender gives a representative of the current situation among university students and considering the deviation is not significant, the findings are therefore a representative of university students from the perspective of both genders on social media use and depression.

4.2.2 Categorization of Participants by Year of Study

Table 4.1 displays the categorization of participants by study level.

Table 4.1

Categorization of participants by Level of Study

Level of Study	Frequency	Percentage
Diploma Student	6	1.7
First Year	74	21.0
Fourth Year	130	36.9
Postgraduate student	16	4.5
Second Year	61	17.3
Third Year	65	18.5
Total	352	100.0

From the outcome in table 4.1, 36.9% of the students were fourth years, 21% were first years, 18.5% were third years, while 17.3% were second years. The findings on the level of study portrays a representation of students from all levels of study and therefore a representation of the situation among the University students in terms of social media utilization and levels of depression. The slight disparity witnessed in the different cohorts of the students can be explained by the proportion of the available students during the

semester that the study was conducted and the willingness to participate in the study despite the stratification.

4.3 Descriptive Findings

The subcategories 4.3.1 through 4.3.4 detail the outcomes of the descriptive analysis.

4.3.1 Descriptive Analysis on the Frequency of Social Media Usage

To determine the frequency of social media utilization, respondents were given a list of 4 main social media apps utilized by students, that included; Facebook, WhatsApp, Twitter and Instagram. The students were required to rate how frequently they the consumed social media platforms on a 5-point Likert scale (0- Not at all, 1- Less than 1 hour, 2- 1 to 3 hours, 3- 3 to 5 hours, 4- More than 5 hours). The scale was further transformed into levels to analyze the frequencies of social media use. As there were 4 platforms, the utmost probable score was 16 (4x4) and the lowermost probable score was 0 (4x0). An entity's total score achieved by adding all the scores for all the platforms. The scores were then classified into three ranks, where scores extending between 0 to 5 indicated low frequency of social media utilization, scores between 6 to 10 indicated moderate frequency of social media usage and scores between 11 to 16 indicated high frequency of social media utilization.

Table 4.2

Frequency of Social Media Use

Social media use	Frequency	Percentage	Min	Max	Mean	Std. Deviation
Low Frequency	23	6.5	3	16	9.79	2.672
Moderate Frequency	188	53.4				
High Frequency	141	40.1				
Total	352	100.0				

According to table 4.2, the majority of students (53.4%) had a moderate frequency of social media consumption, 40.1% had a high frequency of social media consumption, and 6.5%

had a low frequency of social media consumption. The least score attained was three, whereas the uppermost score was sixteen. The mean score for frequency of social media use was 9.79 (SD = 2.672), indicating that students used social media on a moderate basis on average. These results agree with majority of past findings that have indicated that university students utilize social networks. However, the rates on the magnitude to which students' consumption social media differ across studies. For instance, the current findings have shown a moderate use of social networks among university students a study conducted by Chonge (2020) at the Kibabii University in Kenya revealed that 23.1% of the students utilized social media whereas 19.2% utilized social platforms only during the day only, while 14.3% used it at night. Moreover, an investigation by Le Gall, Le Gall, and Jalali (2020) conducted at the university of Ottawa discovered that a high number of students, (84.8%) utilized social media. All these studies agree that university students do use social media only that degree vary from one place to another.

4.3.2 Descriptive Analysis on Forms of Social Media Utilization

To analyze the forms of social media used, the respondents were provided with a list of 4 social media apps (Facebook, WhatsApp, Twitter and Instagram) and were required to rate how frequently they used each of the social media platforms on a 5-point Likert scale (0- Not at all, 1- Less than 1 hour, 2- 1 to 3 hours, 3- 3 to 5 hours, 4- More than 5 hours). The scale was further transformed into levels for each of the social media platform. For each platform, the uppermost potential score was 4 (1x4) and the lowermost potential score was 0 (0x0). An entity's total score was arrived at by adding all scores for each of the platform. The scores were then classified into three groups, where scores extending between 0 and 1 indicated low frequency of use, a score of 2 indicated moderate frequency of use and scores

between 3 and 4 demonstrated a high frequency of use. Descriptive analysis on the forms of selected social media use is highlighted on table 4.3.

Table 4.3

Descriptive Analysis of Forms of Social Media Use

Facebook use	Frequency	Percentage	Min	Max	Mean	Std. Deviation
Low Frequency	122	34.7	0	4	2.22	1.299
Moderate Frequency	73	20.7				
High Frequency	157	44.6				
Total	352	100.0				
WhatsApp Use	Frequency	Percentage	Min	Max	Mean	Std. Deviation
Low Frequency	26	7.4	0	4	3.10	1.038
Moderate Frequency	89	25.3				
High Frequency	237	67.3				
Total	352	100.0				
Twitter Use	Frequency	Percentage	Min	Max	Mean	Std. Deviation
Low Frequency	115	32.7	0	4	2.04	1.192
Moderate Frequency	111	31.5				
High Frequency	126	35.8				
Total	352	100.0				
Instagram Use	Frequency	Percentage	Min	Max	Mean	Std. Deviation
Low Frequency	82	23.3	0	4	2.43	1.227
Moderate Frequency	84	23.9				
High Frequency	186	52.8				
Total	352	100.0				

As illustrated on table 4.3, a good number of the students (67.3%) had a high frequency of WhatsApp use, 52.8% had a high frequency of Instagram use, while 44.6% had a high frequency of Facebook use. Findings on the mean and standard deviation established that on average the students had a high frequency of WhatsApp use 3.10 (SD=1.038), while the students had on average a moderate frequency of Facebook, twitter and Instagram use, 2.22 (SD=1.299), 2.04 (SD=1.192) and 2.43 (SD=1.227) respectively. These outcomes concur

with a past investigation conducted by Ogaji et al. (2017), on patterns of social media use among pharmaceutical undergraduates of Kenyatta University which revealed that WhatsApp was the most popular and the most utilized application by students similar to the results in the present investigation. The popularity of the platform could be best explained by its friendly user interface and its ability to be applied for a variety of functions.

4.3.3 Descriptive Analysis on the Functions of Social Media Use

To establish the functions of social media utilization, participants were provided with a modified version of the social networking usage questionnaire. The questionnaire assessed 4 functions of social media (Social function, academic function, entertainment function and informative function). The functions were assessed using 8 items each on a 5-point Likert scale (0-Never, 1- Rarely, 2-Sometimes, 3-Often, 4-Always). The scales were further transformed into frequencies for each function. The uppermost potential score was 32 (8x4) and the lowermost potential score was 0 (0x8). An entity's overall score was achieved by adding all scores for each of the function. The results were then divided into three tiers, with scores ranging from 0 to 10 indicating a low frequency of use, a score ranging between 11 and 21 indicated moderate frequency of use and scores between 22 and 32 indicated a high frequency of use. Descriptive analysis on functions of social media use is highlighted on table 4.4.

Table 4 4

Descriptive outcome on Functions of Social Media Use

Social Function	Frequency	Percentage	Min	Max	Mean	Std. Deviation
Low Frequency	8	2.3	7	30	20.49	5.162
Moderate Frequency	181	51.4				
High Frequency	163	46.3				
Total	352	100.0				
Academic Function	Frequency	Percentage	Min	Max	Mean	Std. Deviation
Low Frequency	34	9.7	1	32	20.49	7.400
Moderate Frequency	148	42.0				
High Frequency	170	48.3				
Total	352	100.0				
Entertainment function	Frequency	Percentage	Min	Max	Mean	Std. Deviation
Low Frequency	39	11.1	1	32	20.41	6.912
Moderate Frequency	140	39.8				
High Frequency	173	49.1				
Total	352	100.0				
Informative function	Frequency	Percentage	Min	Max	Mean	Std. Deviation
Low Frequency	30	8.5	5	32	22.01	7.390
Moderate Frequency	123	34.9				
High Frequency	199	56.5				
Total	352	100.0				

Results on table 4.4 established that a high number of the students (56.5%) consumed social media for informative purposes, 51.4% moderately used social media for socializing, 49.1% had an increased frequency of social media use for entertainment function, while 46.3% had a high frequency of social media utilization for educational function. Findings on the mean and standard deviation established that on average the students had elevated frequency of social media utilization for obtaining information 22.01 (SD=7.390), while the students had on average a moderate frequency of social media utilization for social function, entertainment function and academic function 20.49 (SD=5.162), 20.49 (SD=7.400) and 20.41 (SD=6.912) respectively. These outcomes agree with past

investigations conducted by Reavley and Pilkington (2014), which established that a majority of Twitter users (29%) regarding schizophrenia majorly focused on raising understanding of schizophrenia, underscoring the importance of social media as an information-sharing platform. Another study by Park and Lee (2012) explored the link between intentions of mobile phone usage, social connections, and emotional well-being among Korean college students, with the studies indicating that the intention of smartphone usage was significantly associated with bonding relations but negatively associated with bridging ties. The current study has underscored the importance of social media platforms in socialization of students, implying that people may be meeting physically less often, which may also have been further influenced by the onset of COVID 19 pandemic.

4.3.4 Descriptive Analysis on the Level of Depression

To determine the rate of depression, participants were needed to respond to Becks Depression Inventory. The inventory assesses depression using 21 group of statements on a 4-point Likert scale, with greater scores demonstrating elevated rates of depression. The scores were classified into 4 categories, where; scores extending between 0 to 16 indicated mild depression, scores extending from 17 to 30 showed moderate depression, scores extending between 31 to 40 showed severe depression, while scores above 40 signified extreme depression (Beck et al, 1988). The findings on the descriptive analysis on levels of depression are outlined on table 4.5.

Table 4.5

Level of Depression

Level of Depression	Frequency	Percentage	Min	Max	Mean	Std. Deviation
Mild depression	267	75.9	0	60	10.03	9.287
Moderate depression	66	18.8				
Severe depression	18	5.1				
Extreme depression	1	0.3				
Total	352	100.0				

As highlighted on table 4.5, a majority of the students (75.9%) experienced mild level of depression, 18.8% had a moderate level of depression, while 5.1% had severe depression. The lowest score acquired was 0, whereas the uppermost score attained was 60. The level of depression mean score was 10.03 (SD = 9.287), demonstrating that on average, the students had a mild level of depression. These results align with a similar study conducted among learners studying medicine at King Khalid University, Abha, which established that 41.8% of the students were mildly depressed, while 9.6% were severely depressed. The mild prevalence of depression among students could likely be mediated by the availability of social support programs available in the Universities, however, the existence of depression among students is a course of concern that creates a need for further interventions to be put in place.

4.4 Findings according to the Study Objectives

The results of the study as per the study objectives is outlined in subsections 4.4.1 to 4.4.4

4.4.1 Relationship between frequencies of social media use and level of depression

Objective one aimed at finding out the relationship between frequency of social media use and level of depression among university students in Nairobi County, Kenya.

The following null hypothesis was tested

H₀1: There is no statistically significant relationship between frequency of social media usage and level of depression among university students in Nairobi County

Since the two variables were examined on an ordinal scale, a Spearman rank-order correlation was employed to establish the relationship between frequency of social media use and level of depression. The summary of results is outlined on table 4.6.

Table 4.6

Relationship between Frequency of Social Media Usage and Level of Depression

		Levels of Depression
Spearman's rho	Frequency of social media utilization	Correlation Coefficient .176**
		Sig. (2-tailed) .001
		N 352

** . Correlation is significant at the 0.01 level (2-tailed).

Findings on the Spearman rank order correlation established a significant positive correlation between frequency of social media utilization and level of depression, $r_s(350) = .176, p < .05$. The findings imply that a rise in frequency of social media usage was correlated with high scores in depression levels. According to the results, the null hypothesis was rejected and the alternate hypothesis was accepted. These findings mean that there is a significant relationship between the frequency of social media utilization and the level of depression. These findings were corroborated by the previous studies conducted by Ogachi, Karega, and Oteyo (2019) and Hunt, Marx, Lipson, and Young (2018) that arrived at a similar conclusion that the frequency of social media use had impacts on depression. However, a survey conducted by Coyne, Rogers, Zurcher, Stockdale, and Booth (2020) believed in the contrary opinion as findings indicated that

spending time on social networks does not influence psychological wellness which includes depression. Coyne et al., (2019) might differ from the outcome of the current investigation may be because the respondents interviewed in the survey utilized online platforms for beneficial purposes.

4.4.2 Relationship between forms social media use and level of depression

The second objective assessed the relationship between forms social media use and depression levels among Nairobi County university students.

The following null hypothesis was evaluated in the study:

H₀2: There is no statistically significant relationship between forms of social media usage and level of depression among university students in Nairobi County

Since the two variables were evaluated on an ordinal scale, a Spearman rank-order correlation was adopted to establish the relationship between different kinds of social media use and depression levels. Table 4.7 displays a summary of the results.

Table 4.7

Relationship between Forms of Social Media Use and Level of Depression

		Level of Depression	
Spearman's rho	Facebook Use	Correlation Coefficient	.125*
		Sig. (2-tailed)	.019
		N	352
	WhatsApp Use	Correlation Coefficient	.170**
		Sig. (2-tailed)	.001
		N	352
	Twitter Use	Correlation Coefficient	.062
		Sig. (2-tailed)	.249
		N	352
	Instagram Use	Correlation Coefficient	-.022
		Sig. (2-tailed)	.676
		N	352

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Spearman rank order correlation findings on table 4.7 established a significant positive relationship between Facebook utilization and WhatsApp use with level of depression, $r_s(350) = .126, p < .05$ and $r_s(350) = .170, p < .01$ respectively. The findings implied that increased levels of Facebook and WhatsApp use were correlated with increased rates of depression. On the other hand, the relationship between use of twitter and use of Instagram with level of depression were not statistically significant, $p > 0.05$.

These results agree with past researchers who have already established different types of social media consumption and depression. For instance, Lake Yimer (2021) in his study found out that depression interrelated positively with a telegram, Facebook, and Whatsapp utilization. Frison and Eggermont (2016) in their study found out that the adverse effects of Facebook utilization majorly happen among females who inactively utilize Facebook and among males who aggressively utilize Facebook in a public place. Kim, Uddin, and

Lee (2021) in their study revealed that having a small number Facebook followers, engaging regularly and utilizing less location tags significantly associated with depressive symptoms. In their investigations, contrary to the findings of this study, Lup, Trub, and Rosenthal (2015) discovered that Instagram consumption was slightly linked with depression, and comparing oneself with others was considerably negatively related with depressive symptoms. Contrary to the current findings that have positively correlated use of Facebook and depression, a study by Tandoc Jr, Ferrucci, and Duffy (2015) documented that using Facebook when envy is controlled does not lead to depression but reduces depression among college students. The past studies reviewed indicated that majority of past studies seem to focus more on Facebook and a few on WhatsApp hence the need to examine more on the recent arising social media platforms. It is therefore essential to exploit the direct consequence of social media consumption on levels of depression in order to design appropriate interventions.

4.4.3 Relationship between Functions of social media use and level of depression

Objective three purposed to measure the relationship between functions of social media use (Social function, educational function, entertainment function and informative function) and level of depression among university learners in Nairobi County, Kenya.

The study aimed at testing the following null hypothesis.

H₀₃: There is no statistically significant relationship between functions of social media utilization and level of depression among university students in Nairobi County

A Spearman rank-order correlation was performed to establish the correlation between functions of social media utilization and rates of depression as the two variables were tested on the ordinal scale. The summary of the results is outlined on table 4.8.

Table 4.8

Relationship between Functions of Social Media Utilization and Level of Depression

		Level of Depression	
Spearman's rho	Social Function	Correlation Coefficient	.324**
		Sig. (2-tailed)	.000
		N	352
	Academic function	Correlation Coefficient	.148**
		Sig. (2-tailed)	.006
		N	352
	Entertainment function	Correlation Coefficient	.339**
		Sig. (2-tailed)	.000
		N	352
	Informative function	Correlation Coefficient	.207**
		Sig. (2-tailed)	.000
		N	352

** . Correlation is significant at the 0.01 level (2-tailed).

Spearman correlation outcomes on table 4.8 established a significant positive relationship between social function and entertainment function with level of depression, $r_s(350) = .324, p < .01$ and $r_s(350) = .339, p < .01$ respectively. The findings implied that utilization of social media for socializing and entertainment were correlated with increased levels of depression. The spearman correlation analysis further established a significant positive correlation between academic function and informative function of social media consumption with level of depression, $r_s(350) = .148, p < .01$ and $r_s(350) = .207, p < .01$ respectively. The findings implied that utilization of social media for academic purposes and obtaining information were correlated with increased levels of depression. The null hypothesis was therefore rejected and the alternate hypothesis was accepted.

A review of past studies has shown that there are fewer investigations done particularly on the functions of social media and the level of depression hence the room for more studies on the affiliation between specific functions of social media and the level of depression.

Majority of past investigations seem to majorly focus on the function of socializing and some have shown that socializing on social media impacts depression. For instance, Giota and Kleftras (2013) found out that problematic social networking site consumption is considerably and positively allied to depression and Neuroticism. Similarly, Al-Dwaikat, Aldalaykeh, and Rababa (2020) found that various functions of social media were associate with depression among students; online socialization was negatively correlated with depression, academic and entertainment purpose for online socialization were effectively linked with mental illness. Hoverer, contrary to the present study outcome, a study by Park and Lee (2012) found that using social media to socialize was connected with reduced levels of depression.

The results of the current investigation imply that spending time on social media is correlated with increased rates of depression, regardless of the function of use. These findings can also best be clarified by the TPB, whereby as people try so much to keep up with a social media image that they cannot afford, they are likely to end up getting depressed, even as they use social media platforms for specific purposes.

4.4.4 Social media-based Strategies towards mitigating level of depression

Objective four sought to identify social media-based strategies that can be put in place towards mitigating levels of depression. To answer the objective, the students were required to list perceived social media strategies that can be put in place towards mitigating depression. The summary of the results is illustrated on table 4.9.

Table 4.9

Social Media based Strategies

Strategies	Frequency	Percent
Psychoeducation on effects of social media	69	19.6
Creation of mental health support platforms	80	22.7
Cyber security laws	19	5.4
Online content censorship	44	12.5
Time censorship	27	7.7
Social media use policies	35	9.9
Individual censorship	45	12.8

From the findings on table 4.9, 22.7% of the students suggested that online platforms should be put in place to support people with psychological health challenges like depression, 19.6% suggested that awareness should be created on the consequences of social media consumption, 12.8% suggested that people should employ individual censorship as a strategy for social media intervention, while 12.5% of the students suggested that online content should be censored to help mitigate level of depression.

These findings were validated by past investigations. An examination conducted by Ridout and Campbell (2018) in their study documented that young people found social networking sites based on intervention accessible, usable, engaging, and supportive. The intervention also increased mental health knowledge among the users. More specifically, Deady et al. (2016) evaluated the efficiency of a computerized web-based self-help intervention approach in managing repetitive depression and alcohol abuse among the youth. Their results revealed a statistically significant decrease in depressive symptoms and alcohol use outcomes in youngsters. Similarly, a survey by Drouin et al. (2018) discovered that those with increased depression rarely identified parents and mental health specialists as bases

of support. Those with elevated depression/anxiety had a high probability of giving social media as a social support channel, however, they equally acknowledged social media might in some cases act as sources of distress.

The results of this investigation and the support from the past studies imply that social media-based interventions and individualized measures can be utilized in reducing negative impacts of social media consumption and particularly depression among university students.

CHAPTER FIVE: SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This segment outlines the summary of findings, conclusions, and suggestions. The section starts with a summary of the results outlined as per the study objectives, then moves on to conclusions drawn from the results, and ultimately to recommendations and propositions for upcoming investigations.

5.2 Summary of the Findings

This segment gives the summary of the study results.

The outcome on the first objective established that majority of the students (53.4%) had a moderate frequency of social media utilization. It was additionally determined that a majority of the students (75.9%) had mild levels of depression. Spearman correlation established a weak positive correlation between frequency of social media utilization and level of depression, $r_s(350) = .176, p < .05$.

Findings on the forms of social media utilization established that a high number of the students (67.3%) had a high frequency of WhatsApp use, 52.8% had a high frequency of Instagram use, while 44.6% had a high frequency of Facebook use. A significant relationship was further established between Facebook use and WhatsApp use with level of depression, $r_s(350) = .126, p < .05$ and $r_s(350) = .170, p < .01$ respectively.

Findings on the third objective established that a good number of students (56.5%) used social media for informative intentions and 51.4% moderately used social media for socializing. A significant relationship was further established between level of depression

and utilization of social media utilization for social function, academic function, entertainment function and informative function, $p < 0.05$.

Findings on the fourth objective established that 22.7% of the students suggested that online platforms should be put in place to support persons living with mental disorders such as depression, while 19.6% suggested that awareness should be created on the adverse impact online socialization.

5.3 Conclusion

The conclusions emanating from the study findings are as follows:

The study established a significant relationship between the frequency of social media utilization and the level of depression. This study therefore concludes that amount of time spent on social media was a significant aspect in the evaluation of depression levels among university students.

The study further established that there was a relationship between forms of social media utilization and the level of depression, however the relationship between Twitter and Instagram with depression were not statistically significant. This study therefore concludes that Facebook and WhatsApp still are more popular among the students and therefore more likely to be correlated with depression as compared to other sites.

The study established that there was significant relationship between the functions of social media (entertainment, socializing, academic purposes and obtaining information) and the level of depression. This study concluded that use of social media to socialize and interact with friends is more correlated to depression among students as compared to use of social

media to acquire information, this is because human interactions involve feelings while acquiring information may not involve significant emotions.

The study also concluded that the students perceived using social media platforms to support persons with psychological conditions, addressing the effects of social media use, having a personal control towards consuming social media ideas, and regulating the kind of materials people can share on the sites as some of the measures that can be used to manage depression among student users.

5.4 Recommendations

From the findings, the suggestions below were made:

- i. This study recommends that university students should take it as their personal initiative to monitor the time they consumed on social networks. Monitoring will help students evaluate whether they spent too much on social media, this way they can adopt personal measure to control their social media consumption.
- ii. The study recommends that the University administration empowers the wellness departments in the institutions to support students who may present with elevated levels of depression and to create awareness on appropriate use of social media
- iii. The study recommends that students to engage in one-on-one communication with their peers and form offline academic groups as well as seek entertainment outside of the social media to improve their sociability which may have an impact on depression levels.
- iv. The research suggests that the government should adopt relevant mental health policies targeting social media platforms that can offer psychosocial support to university students aimed at further reducing the levels of depression and further

regulating the content shared on social media platforms, considering that students are spending a significant amount of time on social media.

5.5 Suggestions for Future Studies

According to the conclusions of the current investigation, future research should concentrate on the following issues:

- i. The current investigation should be replicated with the general population besides the University students to explore correlation that exists between social media utilization and level of depression.
- ii. The current study was limited to a correlational design; nevertheless, a follow-up study should be done to scrutinize the cause-and-effect connection between social media consumption and incidences of depression among students in institutions of higher learning.
- iii. An examination should be done to assess the association between social media utilization and other mental disorders problems besides depression.
- iv. A study should be conducted to explore the protective factors that University students employ to mitigate the levels of depression.

REFERENCES

- Adepoju, T. O., Ladipo, S. O., & Kolawole, A. A. (2015). Do social media utilization and addiction influence undergraduate students' self-perception? A case study of University of Ibadan, Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies*, 6(7), 271-277.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39). Springer, Berlin, Heidelberg.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Al-Dwaikat, T. N., Aldalaykeh, M., & Rababa, M. (2020). The relationship between social networking sites usage and psychological distress among undergraduate students during COVID-19 lockdown. *Heliyon*, 6(12), e05695.
- Alsabaani, A., Alshahrani, A. A., Abukaftah, A. S., & Abdullah, S. F. (2018). Association Between Over-Use of social media and Depression among Medical Students, King Khalid University, Kingdom of Saudi Arabia. *Egyptian Journal of Hospital Medicine*, 70(8).
- Alvarez-Jimenez, M., Alcazar-Corcoles, M. A., Gonzalez-Blanch, C., Bendall, S., McGorry, P. D., & Gleeson, J. F. (2014). Online, social media, and mobile technologies for psychosis treatment: a systematic review of novel user-led interventions. *Schizophrenia Research*, 156(1), 96-106.

- Asante, K. O., & Andoh-Arthur, J. (2015). Prevalence and determinants of depressive symptoms among university students in Ghana. *Journal of affective disorders, 171*, 161-166
- Asiri, A. K., Almetrek, M. A., Alsamghan, A. S., Mustafa, O., & Alshehri, S. F. (2018). Impact of Twitter and WhatsApp on sleep quality among medical students at King Khalid University, Saudi Arabia. *Sleep and Hypnosis (Online), 20*(4), 247-252
- B. A. (2016). Association between social media use and depression among U.S. young adults. *Depression and anxiety, 33*(4), 323-331.
- Bisson, K. H. (2017). The effect of anxiety and depression on college students' academic performance: Exploring social support as a moderator.
- Chonge, H. (2020). Social Media Networks and Their Impact on University Students' Academic Performance: A Case of Kibabii University, Kenya. *Network, 38*, 16-9.
- Chris, L. A. (2015). Influence of social media on study habits of undergraduate students in Kenyan universities. *International Journal of Novel Research in Humanity and Social Sciences, 2*(4), 42-55.
- Coyne, S. M., Rogers, A. A., Zurcher, J. D., Stockdale, L., & Booth, M. (2020). Does time spent using social media impact mental health? An eight-year longitudinal study. *Computers in Human Behavior, 104*, 106160.
- CPS Research International (2012). CPS International Educational Index 2012. Retrieved from <http://www.cps-research.com/downloads/>
- Cronbach, J. L. & Shavelson, J.R. (2004). My Current Thoughts on Coefficient Alpha and Successor Procedures. *Educational and Psychological Measurement, 64*, 391-418.

- Dahlstrom, E., Grunwald, P., de Boor, T., & Vockley, M. (2011). ECAR National study of students and information technology in higher education, 2011. EDUCAUSE Center for Applied Research.
- Datu, J., Valdez, J., & Datu, N. (2012). Does Facebooking make us sad? Hunting relationship between Facebook use and depression among Filipino adolescents. *International Journal of Research Studies in Educational Technology*, 1(2), 83-91.
- Deady, M., Mills, K. L., Teesson, M., & Kay-Lambkin, F. (2016). An online intervention for co-occurring depression and problematic alcohol use in young people: primary outcomes from a randomized controlled trial. *Journal of medical Internet research*, 18(3), e71
- Dean, J. J. (2019). How Smartphones Have Changed the Job for Better and for Worse—The Experiences of Reporters. *Journalism Practice*, 1-16.
- Demirci, K., Akgönül, M., & Akpınar, A. (2015). Relationship of Smartphone use severity with sleep quality, depression, and anxiety in university students. *Journal of behavioral addictions*, 4(2), 85-92.
- Drouin, M., Reining, L., Flanagan, M., Carpenter, M., & Toscos, T. (2018). College Students in Distress: Can Social Media be a Source of Social Support?. *College Student Journal*, 52(4), 494-504.
- Ezeah, G. H., Asogwa, C. E., & Edogor, I. O. (2013). Social media use among students of universities in South-East, Nigeria. *IOSR Journal of Humanities and Social Science*, 16(3), 23-32.

- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117-140
https://www.unicef.org/infobycountry/files/A_Private_Public_Voices_of_Youth_Kenya_study.pdf
- Frison, E., & Eggermont, S. (2016). Exploring the relationships between different types of Facebook use, perceived online social support, and adolescents' depressed moods. *Social Science Computer Review*, 34(2), 153-171.
- Furr, S. R., Westefeld, J. S., McConnell, G. N., & Jenkins, J. M. (2001). Suicide and depression among college students: A decade later. *Professional Psychology: Research and Practice*, 32(1), 97.
- Gakinya, G. W., & Kâ, F. (2015). To Establish How Social Media Use Influences Self-Esteem of the Students of Mount Kenya University, Thika Campus. *Studies in Social Sciences and Humanities*, 2(1), 1-11.
- García-Batista, Z. E., Guerra-Peña, K., Cano-Vindel, A., Herrera-Martínez, S. X., & Medrano, L. A. (2018). Validity and reliability of the Beck Depression Inventory (BDI-II) in general and hospital population of Dominican Republic. *PloS one*, 13(6), e0199750. doi: 10.1371/journal.pone.0199750
- Gerber, J. P. (2018). Social comparison theory. *Encyclopedia of Personality and Individual Differences. Advance online publication. DOI, 10*, 978-3.
- Giota, K. G., & Kleftras, G. (2013). The role of personality and depression in problematic use of social networking sites in Greece. *Cyberpsychology*, 7(3).

- Guinta, M. R., & John, R. M. (2018). Social Media and Adolescent Health. *Pediatric Nursing, 44*(4), 196-202
- Gupta, S., & Bashir, L. (2018). Social Networking Usage Questionnaire: Development and Validation in an Indian Higher Education Context. *Turkish Online Journal of Distance Education, 19*(4), 214-227.
- Hootsuite & We Are Social (2019), “*Digital 2019 Global Digital Overview*,” retrieved from <https://datareportal.com/reports/digital-2019-global-digital-overview>
- Hunt, M. G., Marx, R., Lipson, C., & Young, J. (2018). No more FOMO: Limiting social media decreases loneliness and depression. *Journal of Social and Clinical Psychology, 37*(10), 751-768.
- Hussain, I. (2012). A study to evaluate the social media trends among university students. *Procedia-Social and Behavioral Sciences, 64*, 639-645.
- Jagongo, A., & Kinyua, C. (2013). The social media and entrepreneurship growth. *International Journal of Humanities and Social Science, 3*(10), 213-227.
- Jelenchick, L. A., Eickhoff, J. C., & Moreno, M. A. (2013). “Facebook depression?” Social networking site use and depression in older adolescents. *Journal of Adolescent Health, 52*(1), 128-130.
- Kathuri, N. J., & Pals, D. A. (1993). Introduction to educational research. Egerton. Egerton University Book Series.
- Kaufman, Z. A., Braunschweig, E. N., Feeney, J., Dringus, S., Weiss, H., Delany-Moretlwe, S., & Ross, D. A. (2014). Sexual risk behavior, alcohol use, and social media use among secondary school students in informal settlements in Cape Town and Port Elizabeth, South Africa. *AIDS and Behavior, 18*(9), 1661- 1674.

- Khan, G. F., Swar, B., & Lee, S. K. (2014). Social media risks and benefits: A public sector perspective. *Social science computer review*, 32(5), 606-627.
- Kim, J., Uddin, Z. A., Lee, Y., Nasri, F., Gill, H., Subramanieapillai, M., & McIntyre, R. S. (2021). A systematic review of the validity of screening depression through Facebook, Twitter, Instagram, and Snapchat. *Journal of Affective Disorders*, 286, 360-369.
- KNBS (2014). National ICT Survey Report. Retrieved from:
<https://www.knbs.or.ke/national-ict-survey-report/>
- KNBS (2019). Economic Survey 2019. Retrieved from:
<file:///C:/Users/User/Downloads/Final%20Economic%20Survey%20%202019.pdf>
- Kothari, C.R. (2004). *Research Methods. Methods and Techniques*. New Delhi: New Age International Publishers.
- Kulsoom, B., & Afsar, N. A. (2015). Stress, anxiety, and depression among medical students in a multiethnic setting. *Neuropsychiatric disease and treatment*, 11, 1713.
- Lake Yimer, B. (2021). Social Media Usage, Psychosocial Wellbeing, and Academic Performance. *International Quarterly of Community Health Education*, 0272684X211033482.
- Lavrakas, P. J. (2008). *Encyclopedia of survey research methods*. Sage Publications.
- Le Gall, C., Le Gall, I., & Jalali, A. (2020). Social media usage among university students during exams: Distraction or academic support? *Education in Medicine Journal*, 12(3), 49-53.

- Li, Y., Yao, C., Zeng, S., Wang, X., Lu, T., Li, C., ...& You, X. (2019). How social networking site addiction drives university students' academic achievement: The mediating role of learning engagement. *Journal of Pacific Rim Psychology, 13*
- Lin, L. Y., Sidani, J. E., Shensa, A., Radovic, A., Miller, E., Colditz, J. B., ...& Primack, Longest, K., & Kang, J. A. (2022). Social Media, Social Support, and Mental Health of Young Adults during COVID-19. *Frontiers in Communication, 7*, 828135.
- Lup, K., Trub, L., & Rosenthal, L. (2015). Instagram# instasad: exploring associations among Instagram use, depressive symptoms, negative social comparison, and strangers followed. *Cyberpsychology, Behavior, and Social Networking, 18*(5), 247-252.
- Maroma, F. O. (2015). Relationship between Depression and Pathological Internet Use among University Students in Kenya (Doctoral dissertation, Kenyatta University).
- Masoud, M., Abdeltaweb, A. K., Elmonem, M. A., Masoud, A. T., & Mohammed, O. M. (2019). Prevalence and pattern of social media use and its effect on social health among Fayoum university students. *International Journal of Community Medicine and Public Health, 6*(3), 904-909
- Miot, H. A. (2018). Correlation analysis in clinical and experimental studies. *Journal Vascular Brasileiro, 17*, 275-279.
- Mugenda, A. G., & Mugenda, A. G. (2012). Research methods dictionary. *Nairobi, Kenya: Applied Research & Training Services.*
- Muia, W. M. (2016). *Influence of social media on deviant behavior among secondary school students in Langata sub-county, Nairobi County, Kenya* (Doctoral dissertation, University of Nairobi).

- Nabi, R. L., Prestin, A., & So, J. (2013). Facebook friends with (health) benefits? Exploring social network site use and perceptions of social support, stress, and well-being. *Cyberpsychology, Behavior, and Social Networking*, *16*(10), 721-727.
- Naslund, J. A., Grande, S. W., Aschbrenner, K. A., & Elwyn, G. (2014). Naturally occurring peer support through social media: the experiences of individuals with severe mental illness using YouTube. *PLOS One*, *9*(10), e110171.
- Nassiuma, D. (2015). *Survey sampling: Theory and methods*. Nairobi: Nairobi University Press.
- Njoroge, R. I. T. A. (2013). Impact of social media among the youth on behavior change: A case study of university students in selected universities in Nairobi, Kenya. *Unpublished Masters Thesis*.
- Ogachi, F. M., Karega, M., & Oteyo, J. S. (2019). Relationship between Depression and Pathological Internet Use among University Students. *Cypriot Journal of Educational Sciences*, *14*(2), 201-207
- Ogaji, I. J., Okoyeukwu, P. C., Wanjiku, I. W., Osiro, E. A., & Ogutu, D. A. (2017). Pattern of use of social media networking by Pharmacy students of Kenyatta University, Nairobi, Kenya. *Computers in Human Behavior*, *66*, 211-216.
- Othieno, C. J., Okoth, R. O., Peltzer, K., Pengpid, S., & Malla, L. O. (2014). Depression among university students in Kenya: Prevalence and sociodemographic correlates. *Journal of affective disorders*, *165*, 120-125.

- Park, J., Lee, D. S., Shablack, H., Verduyn, P., Deldin, P., Ybarra, O., ...&Kross, E. (2016). When perceptions defy reality: the relationships between depression and actual and perceived Facebook social support. *Journal of affective disorders, 200*, 37-44
- Park, N., & Lee, H. (2012). Social implications of smartphone use: Korean college students' smartphone use and psychological well-being. *Cyberpsychology, Behavior, and Social Networking, 15*(9), 491-497.
- Parr, C. (2015, February 26). One in four students uses social media to contact university staff. *Times Higher Education*.
- Peltzer, K., Pengpid, S., Olowu, S., &Olasupo, M. (2013). Depression and associated factors among university students in Western Nigeria. *Journal of Psychology in Africa, 23*(3), 459-465.
- Reavley, N. J., & Pilkington, P. D. (2014). Use of Twitter to monitor attitudes toward depression and schizophrenia: an exploratory study. *PeerJ, 2*, e647.
- Rice, S. M., Goodall, J., Hetrick, S. E., Parker, A. G., Gilbertson, T., Amminger, G. P., ...& Alvarez-Jimenez, M. (2014). Online and social networking interventions for the treatment of depression in young people: a systematic review. *Journal of medical Internet research, 16*(9), e206.
- Ridout, B., & Campbell, A. (2018). The Use of Social Networking Sites in Mental Health Interventions for Young People: Systematic Review. *Journal of medical Internet research, 20*(12), e12244
- Rotenstein, L. S., Ramos, M. A., Torre, M., Segal, J. B., Peluso, M. J., Guille, C., ...& Mata, D. A. (2016). Prevalence of depression, depressive symptoms, and suicidal

ideation among medical students: a systematic review and meta-analysis.

Jama, 316(21), 2214-2236

Sarokhani, D., Delpisheh, A., Veisani, Y., Sarokhani, M. T., Manesh, R. E., & Sayehmiri, K. (2013). Prevalence of depression among university students: a systematic review and meta-analysis study. *Depression research and treatment*, 2013.

Simoncic, T. E., Kuhlman, K. R., Vargas, I., Houchins, S., & Lopez-Duran, N. L. (2014). Facebook use and depressive symptomatology: Investigating the role of neuroticism and extraversion in youth. *Computers in Human Behavior*, 40, 1-5.

Sitota, G., Misganaw, A., & Tarekegn, A. (2017). The relationship between students Facebook usage and their psychosocial adjustment of Haramaya university students, Ethiopia.

Sivertsen, B., Hysing, M., Knapstad, M., Harvey, A. G., Reneflot, A., Lønning, K. J., & O'Connor, R. C. (2019). Suicide attempts and non-suicidal self-harm among university students: a prevalence study. *BJPsych Open*, 5(2)

Smith, A., & Anderson, M. (2018). Social media use in 2018: A majority of Americans use Facebook and YouTube, but young adults are especially heavy users of Snapchat and Instagram. *Pew Research Center*.

Stanton, A. G., Jerald, M. C., Ward, L. M., & Avery, L. R. (2017). Social media contributions to strong Black woman's ideal endorsement and Black women's mental health. *Psychology of Women Quarterly*, 41(4), 465-478.

Suls, J., & Wheeler, L. (Eds.). (2013). *Handbook of social comparison: Theory and research*. Springer Science & Business Media. Training Services.

- Tahir, T., Ahmed, Q. W., Batool, S., Ishfaq, U., Zaman, A., & Minaz, M. (2021). Effects Of Depression On The Academic Learning Of Students At University Level. *LINGUISTICA ANTVERPIENSIA*, 7407-7420.
- Tandoc Jr, E. C., Ferrucci, P., & Duffy, M. (2015). Facebook use, envy, and depression among college students: Is facebooking depressing?. *Computers in human behavior*, 43, 139-146.
- Tsitsi Chikandiwa, S., Contogiannis, E., & Jembere, E. (2013). The adoption of social media marketing in South African banks. *European Business Review*, 25(4), 365-381.
- UNICEF (2013). A Private and Public Space examining the use and impact of digital and social media among adolescents in Kenya.
- Välimäki, M., Athanasopoulou, C., Lahti, M., & Adams, C. E. (2016). Effectiveness of social media interventions for people with schizophrenia: a systematic review and meta-analysis. *Journal of medical Internet research*, 18(4), e92.
- Vogel, E. A., Rose, J. P., Roberts, L. R., & Eckles, K. (2014). Social comparison, social media, and self-esteem. *Psychology of Popular Media Culture*, 3(4), 206
- Wahed, W. Y. A., & Hassan, S. K. (2017). Prevalence and associated factors of stress, anxiety and depression among medical Fayoum University students. *Alexandria Journal of Medicine*, 53(1), 77-84.
- Waithaka, M. W. (2013). *Internet use among university students in Kenya: a case study of the University of Nairobi* (Doctoral dissertation, University of South Africa).
- Wallace, P. (2014). Internet addiction disorder and youth, *EMBO Reports*, vol. 15, no. 1, pp. 12-16.

- Wang, Y. P., & Gorenstein, C. (2013). Psychometric properties of the Beck Depression Inventory-II: a comprehensive review. *Brazilian Journal of Psychiatry*, 35, 416-431.
- Wanyoike, B. W. (2015). Suicide among university students in Kenya: causes, implications and interventions. *Journal of Language, Technology & Entrepreneurship in Africa*, 6(1), 35-53.
- Weston, K., Mutiso, S., Mwangi, J. W., Qureshi, Z., Beard, J., & Venkat, P. (2011). Depression among women with obstetric fistula in Kenya. *International Journal of Gynecology & Obstetrics*, 115(1), 31-33.
- Woods, H. C., & Scott, H. (2016). # Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of adolescence*, 51, 41-49.
- Woods, H. C., & Scott, H. (2016). # Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of adolescence*, 51, 41-49.
- World Health Organization (2018). Depression fact sheet 22 March 2018. *This report documents the increase in Depression world-wide.*
- World Health Organization. D. (2017). Other Common Mental Disorders: Global Health Estimates. *World Health Organization, Geneva.*

APPENDIX A1: INFORMED CONSENT

Dear Respondent,

I am a Postgraduate student obtaining a Master's degree in counseling psychology at Kenyatta University. I am carrying out an investigation on the **Relationship between Social Media Use and Level of Depression among University Students in Nairobi County Kenya. On this Questionnaire, do not write your name anywhere.** Please take the time to carefully read the instructions and respond to each question as honestly as possible. If you have any difficulty comprehending any of the questions, please don't hesitate to ask for help. There is no such thing as a correct or incorrect response; all responses are valid. Your responses and opinions will be treated with strict confidentiality and used solely for the purposes of the study. Please tick [] or **write down** the answers that echoes your honest opinion. **Please respond to all items.**

Your participation in this investigation is **voluntary**. Please complete the consent form below to certify that you have read the above information and willingly consented to participate in this investigation.

Thank you so much for your assistance.

Sincerely

Stephen Muchiri Kinyua

Consent

I have read the preceding information and understand that participation in this study is entirely voluntary, and that my privacy and anonymity will be protected. I accept to participate in this activity.

Respondent's signature _____ Date _____

APPENDIX A2: STUDY QUESTIONNAIRE

SECTION A: DEMOGRAPHIC CHARACTERISTICS

Tick the suitable answer or fill in the spaces provided

1. Kindly indicate your Gender

Male

Female

2. Kindly indicate your level of study

First Year

Second year

Third Year

Fourth Year

Other Please indicate _____

SECTION B: FREQUENCY AND FORMS OF SOCIAL MEDIA USE

How frequently do you use the following social media apps in a day, please tick in the appropriate box

S/ NO	SOCIAL MEDIA PLATFORM	Not at all	Less than 1 hour	1 to 3 hrs	3 to 5 hrs	Mo re tha n 5 hrs
1.	Facebook					
2.	WhatsApp					
3.	Twitter					
4.	Instagram					

SECTION C: FUNCTIONS OF SOCIAL MEDIA USE

This is a questionnaire designed to evaluate an individual's social networking usage. The scale's items are presented in the form of

statements. You must carefully read each statement and respond by ticking () just the one that you believe is the most appropriate and true in your situation. There is no right or incorrect answer. Example: I utilize social media for sharing pictures.

Always Often Sometimes Rarely Never

In the above statement,if you feel the correct response could be Always, then put a tick

(✓) in that column. Kindly do not leave any statement unattempted. There is no time limit. Your answers will be utilized for research purposes solely and the answers will be always kept confidential.

Sr	Social Function	Always	Often	Sometimes	Rarely	Never
01	I utilize social media for dating					
02	I prefer using social media to communicate with relatives					
03	I utilize social media to acquire information on social occurrences					
04	I utilize social media to chat with friends					
05	I prefer to engage in social media for social networking					
06	I employ social media to keep in touch with the latest gossip					
07	I utilize social media to send and receive photos from families and acquaintances					

08	I use social media to interact anonymously with people					
	Academic Function					
09	I utilize social media applications for virtual class group discussion.					
10	I utilize social media to consult with my lecturers					
11	I prefer using social media to do my academic research work					
12	I utilize social media to prepare for exams					
13	I utilize social media to create multimedia presentations					
14	I employ social media to share study materials					
15	I look in social media sites to get updated on important academic dates					
16	I utilize social media to purchase academic materials					
	Entertainment Function					
17	I utilize social media to watch music videos					
18	I employ social media to view and share memes					

19	I prefer using social media to watch movies					
20	I utilize social media to share audio files					
21	I utilize social media to watch pornography					
22	I utilize social media to listen to music					
23	I utilize social media for video chatting					
24	I engage in social media to create live videos					
	Informative Function					
25	I utilize social media to follow current news					
26	I utilize social media to get job related information					
27	I utilize social media to share and receive ideas					
28	I utilize social media for career development					
29	I utilize social media to trade goods and services					
30	I utilize social media to publish content online					
31	I utilize social media for digital marketing					
32	I utilize social media to review products and services					

SECTION D: BECKS DEPRESSION INVENTORY

This section contains of 21 groups of statements that measure depression. Kindly read each group of questions keenly and then select the one statement in every group that best defines how you have been feeling for the past two weeks, including today. Circle the number beside the statement you pick. If various statements in the group appear to apply equally well, circle the highest number for that group.

1.

- 0 I do not feel sad.
- 1 I feel sad
- 2 I am sad all the time and I can't snap out of it.
- 3 I am so sad and unhappy that I can't stand it.

2.

- 0 I am not particularly discouraged about the future.
- 1 I feel discouraged about the future.
- 2 I feel I have nothing to look forward to.
- 3 I feel the future is hopeless and that things will not improve.

3.

- 0 I do not feel like a failure.
- 1 I feel I have failed more than the average person.
- 2 As I look back on my life, all I can see is a lot of failures.
- 3 I feel I am a complete failure as a person.

4.

- 0 I get as much satisfaction out of things as I used to.
- 1 I don't enjoy things the way I used to.
- 2 I don't get real satisfaction out of anything anymore.
- 3 I am dissatisfied or bored with everything.

5.

- 0 I don't feel particularly guilty
- 1 I feel guilty a good part of the time.

- 2 I feel quite guilty most of the time.
3 I feel guilty all of the time.
- 6.
- 0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.
- 7.
- 0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.
- 8.
- 0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weaknesses or mistakes.
2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.
- 9.
- 0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.
- 10.
- 0 I don't cry any more than usual.
1 I cry more now than I used to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't cry even though I want to.

11.

- 0 Things don't upset me any more than they did before.
- 1 I'm a little more irritated than usual right now.
- 2 I'm easily annoyed or irritated most of the time.
- 3 I am constantly angry.

12.

- 0 I'm still interested in other people.
- 1 I'm not as interested in other people as I once was.
- 2 I've lost most of my curiosity about other people.
- 3 I'm no longer interested in other individuals.

13.

- 0 I make the best decisions I've ever made.
- 1 I'm procrastinating more than I used to.
- 2 I'm having more trouble making decisions than I used to.
- 3 I'm unable to make any decisions at all.

14.

- 0 I don't think I look any worse than I did before.
- 1 I'm concerned that I'm becoming old and unattractive.
- 2 I believe my looks is undergoing lasting alterations that make me appear undesirable.
- 3 I believe I am unattractive.

15.

- 0 I'm about as productive as I was before.
- 1 Getting started on something requires extra effort.
- 2 Anything I accomplish requires a lot of effort on my part.
- 3 I'm unable to work in any capacity.

16.

- 0 I'm able to sleep as well as I usually do.
- 1 I don't get as much sleep as I used to.
- 2 I wake up 1-2 hours earlier than usual and have a difficult time falling back asleep.

- 3 I wake up many hours earlier than usual and am unable to get back asleep.
- 17.
- 0 I don't become any more weary than I normally do.
- 1 I am more easily exhausted than I used to be.
- 2 I grow tired of practically everything I do.
- 3 I'm exhausted and unable to do anything.
- 18.
- 0 My appetite isn't any worse than it has been in the past.
- 1 My appetite isn't as strong as it once was.
- 2 My appetite has deteriorated significantly.
- 3 I don't have any desire to eat anymore.
- 19.
- 0 I haven't dropped much, if any, weight recently.
- 1 I've dropped over five pounds.
- 2 I've dropped over 10 pounds.
- 3 I've dropped over fifteen pounds.
- 20.
- 0 I'm not any more concerned about my health than I usually am.
- 1 I'm concerned about physical issues such as aches, pains, stomach upset, or constipation.
- 2 I'm quite concerned about physical issues, and it's difficult for me to think of anything else.
- 3 I can't think of anything else since I'm so concerned about my bodily problems.
- 21.
- 0 My interest in sex hasn't changed in the last few months.
- 1 I'm not as interested in sex as I once was.
- 2 I am nearly completely uninterested in sex.
- 3 I've entirely lost interest in sex.

**SECTION E: RECOMMENDATIONS FOR SOCIAL MEDIA STRATEGIES
TOWARDS REDUCING LEVEL OF DEPRESSION**

1. Do you think there is a connection between social media and depression

a) YES

b) NO

2. What social media-based strategies do you think can be adopted decrease level of depression

THANK YOU FOR YOUR PARTICIPATION

APPENDIX A3: NACOSTI RESEARCH PERMIT



REPUBLIC OF KENYA

Ref No: 305487



Date of Issue:

06/January/2021

RESEARCH LICENSE



This is to Certify that Mr. Stephen Muchiri of Kenyatta University, has been licensed to conduct research in Nairobi on the topic: RELATIONSHIP BETWEEN SOCIAL MEDIA USE AND LEVEL OF DEPRESSION AMONG UNIVERSITY STUDENTS IN NAIROBI COUNTY, KENYA for the period ending : 06/January/2022.

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**Director General NATIONAL COMMISSION
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