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SOCIAL MEDIA, SUBSTANCE USE AND MENTAL HEALTH AMONG  
ADOLESCENTS IN THE LA NKWANTANANG MADINA MUNICIPALITY.

BY

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**DECLARATION**

I, Sharon Margaret Obiri- Yeboah, the author of this dissertation, do hereby declare that with the exception of the references to the literature and works of other researchers which have been duly cited in the work, this dissertation is the result of my original work under the supervision of my academic supervisor, Dr. Franklin Glozah. This dissertation has neither in part or whole, been presented for any award.

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### DEDICATION

This work is dedicated to the Almighty God without whom I would not have made it thus far. He has been there for me from day one, and He is the secret behind my being and survival. The Lord who shares His Glory with none other, the Faithful God who never lies and who looks to perform His words, accept this dedication from your dear daughter.

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### LIST OF ABBREVIATIONS

CNS	Central Nervous System
FDA	Food and Drugs Authority
GHSEC	Ghana Health Service Ethics Review Committee
JHS	Junior High School
LANMMA	La Nkwantang Madina Municipal Assembly
MH	Mental Health
NIDA	National Institute on Drug Abuse
OSA	Obstructive Sleep Apnea
PLWD	Persons Living with Disability
QoL	Quality of Life
SHS	Senior High School
USA	United States of America
WHO	World Health Organization

## OPERATIONAL DEFINITIONS

**Adolescent:** an individual between the ages of 10 and 19 years.

**Substance use:** the use, misuse or co-use of alcohol, tobacco and tramadol.

**Social media:** any computer application and/or telecommunication route that makes it easy for computer-generated societies and groups to originate and exchange information, content, ideas and common interests.

**Social media use:** the routine use of any social media platform whether for educational or entertainment reasons.

**High social media use:** daily use of social media platforms exceeding 4 hours per day.

**Moderate social media use:** daily use of social media platforms for more than 1 hour but not exceeding 4 hours per day.

**Low social media use:** daily use of not more than 1 hour a day or the absence of a daily use of social media platforms even if there are occasional incidences of more than 1 hour of social media use on some specific days.

**No exposure to social media:** where there is no means of accessing social media platforms, or the voluntary withdrawal from the use of social media platforms.

**Mental health:** it is not the mere absence of mental illness but denotes the condition of well-being where people recognize their own capabilities, can handle the usual strains life brings, can work efficiently and effectively and are capable of positively contributing to their societies.

**Suicide ideation:** thinking about or planning suicide.

**Depression:** common psychological condition which is usually characterized by a sad disposition, lost interest and/or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy and poor concentration.

**Anxiety:** a feeling of uneasiness instigated by expectations of ill-defined threat or menace that is not realistically based.

#### ABSTRACT

**Background:** Social media directly affects the mental health of adolescents and also plays a role in their use of various substances such as alcohol, tobacco and tramadol which could in turn affect their mental health. Sociodemographic factors such as age, sex, religion, presence and absence of parents as well as parental educational background play a role in the mental health of adolescents and their social media use.

**Objectives:** The aim of this study was to explore social media, substance use and mental health experiences among adolescents in the La Nkwantang Madina Municipality, Greater Accra Region.

**Methods:** A qualitative research approach was carried out with 12 purposively selected adolescents- 6 males and 6 females. Face-to-face in-depth interviews using a semi-structured interview guide was used for data collection. Data was transcribed and then analyzed using thematic analysis.

**Results:** The study revealed that participants had good control over their social media environment regardless of whether they were high or low social media users. Adolescents who had ever engaged in substance use acknowledged the harmful nature of substances. Also, peer pressure and curiosity led to their use of substances and not necessarily parental use of substances. Advertisements seen on social media concerning substances were seen as unwarranted among adolescents as they could entice them to use these substances. Overall, participants said they were happy with their mental health. The results show that

sociodemographic factors - religion and presence of parents boosted these adolescent mental health outcomes.

**Conclusion:** Using social media in the right ways helps adolescents to avoid the negative effects that could arise from social media use. Even though advertisements could entice adolescents into social media use, the decision to use substances is solely a decision of an individual. Frequent use of social media, presence of parents and religiosity improve the mental health of adolescents.

## CHAPTER ONE

### 1. INTRODUCTION

#### 1.1. Background

In many upper middle income countries in Africa, the average person owns two electronic gadgets and with adolescents spending a significant part of their day on technological devices and the internet, it is a no-brainer that adverse effects such as computer vision syndrome, headaches and maladaptive behaviors accompany the benefits that come with such devices (Chetty-Mhlambi et al., 2020; Manuhue & Hamidi, 2013; Parihar et al., 2016). In the absence of recommended guidelines and standards as far as electronic devices and social media platforms are concerned, it is difficult to ascertain the limits that individuals including adolescents should adhere to in their pursuit of information, communication and entertainment (Taylor, Slezniak, & Silovsky, 2020; Throuvala, Griffiths, Kennellison, & Kosa, 2019). Social media is widely used among adolescents in the twenty-first century with an average use of eight hours a day per youth, and though it has presented with many benefits such as exchange of information, easy communication and easy access to information, it has also presented a dark side which seems to be doing more harm than good to adolescents (Istrevis, Wolff, Paetz, & Gibbs, 2017; Radovic, Gmelin, Stein, & Miller, 2017; Warburg, Kriston, & Thomasius, 2020). Some of the negative impacts of social media among adolescents include increased stress and depression, easy exposure to and marketing of tobacco, alcohol, and other unhealthy substances in addition to simulating unsafe behaviors related to smoking and risky sexual patterns; all of which have negative effects on the mental health of adolescents (Merrill & Liang, 2019; Radovic et al., 2017; Yang, Floyd, & Tanner, 2019). There has been a rise in mental health disorders all over the world. About four million young people have serious mental health disorders and are more likely to drop out of school as compared to their

healthy counterparts in the United States (Smith-Fruman & Evans-Agnew, 2017). In Ghana, about 2,800,000 people have a presentation of mental illness ranging from moderate to severe with only 2% of such people receiving treatment (WHO, nd). Meanwhile, a survey in China showed that people living with mental health disorders hardly sought for help. 52.38% of patients with mental health issues delayed in seeking help because of ignorance or misconceptions related to mental health disorders (Liu et al., 2018).

Social media to an extent influences adolescents' consideration of the use of substances like tobacco and alcohol. It has been reported that more than 50% of older smokers started in their early adolescence and adolescents who had peers using substances were more likely to indulge in its use (Yang et al., 2019). With the recent advent of the synthetic opioid-like substance, tramadol, among adolescents in Africa including Ghana, attempts have been made to curb its availability and misuse by the Food and Drugs Authority (FDA) of Ghana. This is due to the wide range of side effects that arise from the addictive tendencies it presents with. Such negative effects include depression, brain damage, anxiety, suicide ideation and hallucinations. Adolescents who used tramadol were more likely to engage in the use of other substances such as alcohol (Food and Drugs Authority Ghana, 2018; Fassin, Afira, Yakubu, & Nachinab, 2019; Nazarradeh, Bielel, & Carson, 2014). If substances such as tobacco, tramadol and alcohol are responsible for the highest morbidities and mortalities, it is vital to get a hold on why adolescents continue to engage in their use as well as the factors that endorse such practices (Chikere & Ebuonyi, 2019; Doku, Koivusilta, & Kimpeli, 2012; NIDA, 2016; World Health Organisation, 2014). It is imperative to understand adolescents and how they are affected in diverse ways by social media, substance use, sociodemographic factors and their mental health status (Bandura, 1971). This understanding can be used to enlighten adolescents and their care givers on the roles that these factors play in the overall health and

wellbeing of adolescents (Bakken & Demant, 2019; Dhir, Yousafzai, Kaur, & Chen, 2018; Bakkarvan, Johnson, Villanti, Evans, & Turner, 2019; Westgate & Holliday, 2016).

## 1.2. Problem statement

Globally, adolescents have various struggles including the temptation to engage in substance use, risky sexual behaviors, criminal activities or patterns that endanger their overall health. They are also faced with various mental health issues that lead them to consider dropping out of school or even attempt suicide which is the third leading cause of death among adolescents (Owusu, 2008). Mental health issues such as depression and anxiety among adolescents in their formative years affects their healthy transition into adulthood and alters their ability to have a sound mind hence impairing their learning and social potentials. Adolescents with mental health issues end up lacking proper conduct and eventually make wrong choices that consequently affect their health, their families, the society and the economy at large (Rojas et al., 2019). Studies have shown that perceptions adolescents have about substances, for example, their perceived benefits of calming oneself when stressed could lead to adolescents' use of substances and consequent mental health issues (Allyan et al., 2015; Gotsang, Mashalla & Selisivo, 2017; Sales et al., 2018). In Ghana, 43.8% of Senior High Schools (SHS) students use drugs and 15.1% had reported having effects from alcohol use. Five million people die from tobacco use every year globally, yet 84% of tobacco users live in developing countries and 9 out of 10 lung cancers are attributable to smoking. Alcohol is responsible for 88,000 deaths yearly with other drugs causing 47,000 deaths annually. Tramadol is responsible for a number of addictions to substances such as alcohol and it has led to the mental health disorders of a lot of African adolescents. While some studies have shown that recent mental health issues, excessive substance use and complications from risky sexual behaviors in adults

began in their adolescence ( Owusu, 2008; Patterson & Ashari, 2019; Radevic et al., 2017; Srivastava & Gold, 2019), some other studies also suggest a significant link between social media use and subsequent substance use and poor mental health status (Barry, Sidoni, Briggs, Reiter, & Lindsey, 2017; Karikari, Osei-Frimpong, & Owusu-Frimpong, 2017; Merrill & Liang, 2019; Yang et al., 2019). The perceptions adolescents have about using social media, if they are ill-natured can negatively impact the outcomes of adolescents' online presence. For instance, studies show that some adolescents use social media as a medium of boosting self-confidence through 'likes', or as a means of feeling accepted by peers through activities they agree to engage in. Thus, problematic social media use could be detrimental to the growing adolescent (Bainyi et al.,2017; Boer et al., 2020; Steinsbekk et al. 2021). Due to the increased prevalence of social media use among the youth, more research has to be done on the role social media is playing on the overall mental health and wellbeing of adolescents in Ghana. This study sought to add on to the limited set of existing knowledge on the topic in Ghana, especially in a time where due to easy internet access, the youth are quickly simulating trends that may be detrimental in the long run.

### **1.3. Research questions**

1. What is the perception of adolescents in the La Nkwantang Madina Municipality, about social media use and substance use?
2. How do adolescents in the La Nkwantang Madina Municipality, understand substance use and how do they experience substance use and mental illness?
3. What roles do social media use and socio-demographic factors play in the mental health of adolescents in the La Nkwantang Madina Municipality?

#### **1.4. Objectives**

##### **1.4.1. General objectives**

To identify the determinants of social media use, substance use, mental health and associated factors among adolescents in the La Nkwantang Madina Municipality.

##### **1.4.2. Specific objectives**

1. To explore the perception of adolescents in the La Nkwantang Madina Municipality, about social media use and substance use.
2. To explore how adolescents in the La Nkwantang Madina Municipality, understand substance use and how they experience substance use and mental illness.
3. To explore the roles of social media use and sociodemographic factors in the mental health status of adolescents in the La Nkwantang Madina Municipality.

#### **1.5. Conceptual Framework**

Mental wellbeing of adolescents is constantly being determined by various factors in their environment. Such factors include the use of substances such as alcohol, tobacco and tramadol which in one way or the other leads to depression, anxiety and suicide ideation due to their addictive tendencies. Social media use can determine the existence and severity of various mental health outcomes among adolescents such as anxiety, depression, and suicide ideation. Adolescents who use social media platforms in excess (high use) are more likely to experience the mental health issues mentioned earlier as compared to their colleagues who use social media platforms moderately or on a low scale (moderate and low use) or those who do not use the social media platforms at all (no exposure). In the case of high social media users, peer pressure plays a role

specially among those who seek to look desirable in the eyes of their peers. They constantly seek to look their virtual best and eventually realize that they can't keep up because the version of themselves being presented is non-existent. This when present in an overwhelming measure can cause adolescents to feel hopeless and to an extreme extent, harbor suicidal thoughts. Social media use is a contributor to some adolescents' use of substances which come through easy advertisements and online peer pressure. Adolescents may feel obliged to simulate their friends on social media and be compelled to behave like them in order to win the acceptance of their circle of friends. This can cause them to make decisions contrary to what they sometimes truly want.

Sociodemographic factors such as sex, age and religion of adolescents have been shown to play a role on the mental health of adolescents. Parental factors such as presence or absence of parent(s) and parental educational background also affects the mental health of adolescents. These factors directly or indirectly determine the mental health status of adolescents to a large extent.

Sociodemographic factors such as age plays a role on the use of social media among adolescents as younger adolescents are more active on social media platforms as opposed to older adolescents.

The mental health status of adolescents has been shown to influence their use of substances.

Adolescents who feel depressed or anxious, and even those who have suicidal thoughts sometimes resort to the use of substances as a means of coping with their emotional state. The temporary relief they experience causes them to repeat the use of the substances till they become totally dependent on them in high doses (Figure 1.5).

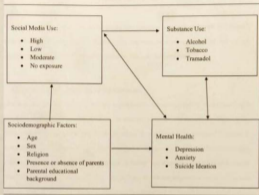


Figure 1.5: Conceptual framework showing the relationships between social media use, substance use, sociodemographic factors and mental health.

(Source: Author's Construction)

## CHAPTER TWO

### 2. LITERATURE REVIEW

#### 2.1. Introduction

This section presents content on social media use, substance use (with emphasis on tramadol, alcohol and tobacco) and mental illness (with emphasis on depression, anxiety and suicide) among adolescents and the relationships that exist between them.

#### 2.2. Adolescence and some associated challenges

Adolescence is the stage where individuals experimentally engage in a variety of activities which are related to injuries, illness and fatalities, for example substance use and suicide (Ferrin et al., 2019). During this time period, individuals transition from childhood into adulthood (Olanide & Songbode, 2016; Rokhsah, 2015). Some of the major threats to the overall health and well-being of adolescents include excessive alcohol intake, substance use, depression and behavior disorders (Brunborg & Burdzovic Andrus, 2019). Studies have shown that exposure to social media, and substances such as alcohol, tramadol and tobacco adversely affect the mental health of adolescents with depression significantly leading to suicide among adolescents (Park, Yang, & Kim, 2019; Lee, Young, Brown, & Rancour, 2016).

According to WHO, it is prudent that adolescents' health be given the major attention it deserves. Since adolescents experience physical growth before they experience emotional and cognitive development, it is imperative that they are given a certain level of response from society as these changes have health consequences that lead on into a lifetime (WHO 2014).

Previous studies suggests that, alcohol, tramadol and tobacco are amongst the topmost substances responsible for the highest morbidities and mortalities among adolescents (Food and Drug

uberty Ghana, 2018; Fuscini, Afiza, Yakubu, & Nachimb, 2019; Scull, Franzese, & Dodge, 2014; Vucuranki, Marnada, John, & Oamu, 2015; World Health Organisation, 2014) while depression, anxiety and suicide ideation lead the mental health challenges that adolescents face (Amari, Adjorlolo, & Kagbey, 2019; Baiden, Tadeo, Tomi, Senstrunk, & Boateng, 2019; Boyan, in, Villarreal-Oñilora, & Sisk, 2019; Park et al., 2019; Kew et al., 2016).

### 2.3. Social media use among adolescents

ocial media refers to any internet-based network of individuals who have agreed to form a virtual community to facilitate the exchange of information in forms such as text, graphics and sound (Venugate & Holliday, 2014) and has been described to play a key role in the social health of individuals. Social media has drastically changed communication patterns over the internet, and brought about beneficial advancements in health care such as improved patient-provider communication, health surveillance, health promotion and medical supplies and services marketing (Milne & Ni, 2017; Nguyen et al., 2017). Research has it that social media has introduced new communication methods and norms which cannot be understood based on old traditions. It is heavily used among adolescents worldwide and acts as a smart technological advancement that simultaneously benefits and adversely affects individuals and organizations since its use must be wisely prioritized to reap the maximum benefits possible from such a platform. With the vast population of users having differing cultural norms, values and way of life, users of social media also need a level of cultural competence to ensure a socially safe environment for interpersonal interactions since building networks is one of its primary use (Groth, Longo, & Aris, 2017; Ha, Liu, & Gu, 2018; Hakkiovan et al., 2019; Radovic et al., 2017). The most popularly used media among teens is Instagram being used by 76% of teens, snapchat having 75%,

facebook with 66% of teens and twitter having 47% of adolescents. Most adolescents initially get their phones for text messaging purposes but it gets easier to stay on various social media platforms because of increased access to internet connectivity even in their bedrooms (Merrill & Liang, 2019).

Adolescents use social media for various reasons which include communication, making new friends, watching pictures of friends and commenting on them among others. It is interesting to note that adolescents can decipher between positive and negative uses of social media. Some adolescents report some positive uses of social media which include enhancing their creative skills, using jokes and motivational quotes, and joining support groups that provide a sense of belonging. However, some negative uses of social media as reported by adolescents included making online friends with strangers, exchange of content that encouraged risky sexual behavior, bullying, comparing themselves to others and giving out more than necessary personal information (Merrill & Liang, 2019; Radovic et al., 2017).

The negative impacts of social media on adolescents' stem from the support for risky behaviors from peers and celebrities. This is easy because of the flexibility in the sharing and viewing of content from diverse sources and the ability to "like" them which shows the "acceptability" of one's acts and displays by their social media followers. This has a significant impact on those adolescents who are heavily influenced by the opinions of others and thus they define their identity based on other's perception of them. This establishes the great influence peer pressure has on teens (Baikien & Demant, 2018). According to Bandura, habits are formed as a result of personal experience or observing others way of doing things and some behavior patterns are reinforced if they produce the desired results (Bandura, 1971).

#### 2.4. Substance use among adolescents

Tobacco, alcohol and cannabis are among the most commonly used substances among adolescents. Factors that influence substance use among the youth revolve around their peers, their perception of negative side effects of substances and inquisitiveness (Do et al., 2019). Adolescents who consume tobacco are more likely to consume alcohol, and their chances of partaking in sexual misconduct are higher than adolescents who do not engage in such activities (Blaiden, Graaf, Amu, Acolatse, & Adetun, 2019). One million, eight hundred thousand people die yearly as a result of alcohol usage globally and excessive alcohol intake predisposes one to cardiovascular issues. Excessive substance use diminishes adolescents' potential for optimum cognitive development and leads to social misconduct. It also leads to unintentional injuries that are a major cause of death among young adults and adolescents in Ghana. Despite being taught about the dangers of substance use in Ghana, 43.8% of adolescents in Ghanaian Secondary schools used drugs and 14.6% had drunk more than 2 alcoholic drinks in the past 30 days. Tobacco use is globally the second leading cause of death worldwide and if it is not controlled, an estimated 10 million people will die annually from tobacco use by 2020. Smoking tobacco increases the risk of pulmonary and oral cancers, cardiovascular diseases and strokes at an older age. It is prudent to study patterns of alcohol and substance use in adolescents because they eventually translate into health complications at an older age (Owusu, 2008). It should be noted that adolescent alcoholics were more likely to indulge in smoking activities (Aldrich, Brewer, & Hall, 1999) and students who regularly consumed substances were more likely to have difficulties studying and engaged in fights more often (Westgate & Holliday, 2016). Every day, more than 40,000 young people around the world at an age of 11 who reside in low- and middle-income countries are initiated into smoking tobacco. This has led to a "pediatric epidemic" of smoking among teenagers and its eventual addiction, it is

erated that smoking alone could cause close to one billion deaths this century. The absence of  
socio-surveillance systems in developing countries makes it almost impossible to see the true  
lection of tobacco induced complications on the populace especially the youth and this makes  
their research into such an area key if measures of substance use and its mishaps are to be  
ntrolled (Page, Danielson, & Lucia, 2011).

ately the unwise use of tramadol, a synthetic drug, among sub-Saharan African adolescents has  
on on the rise with individuals taking more than the recommended dosage. Despite its many  
verse effects such as bewilderment, depression, anxiety, insomnia, hallucinations, mood  
anges, liver and kidney diseases, suicide ideation, brain damage and in severe cases loss of life,  
youth still indulge in its use. The males usually mix it with energy drinks or alcohol and  
sometimes ingest it like "tic-tac" to boost their strength for hard manual activities and sexual  
tivity. Tramadol acts like heroin and can cause psychotic issues (Mante, 2018; Oppong- Wiafo,  
18). The more an individual uses tramadol, the more their tolerance levels for the drug increases  
ich intensifies addiction and dependence on the drug despite witnessed adverse effects. Use of  
radol strains relationships, is detrimental to one's overall health and adversely affects an  
ividual's finances and self-worth. The problem that existed with tramadol sold as "alium" was  
at since it didn't have the label as a drug, purchasing it for use didn't have any stigma attached  
it (Ehinson, Sandew, Agyekum, Kpangpari & Asiaktiwen 2018; Nyabot, 2018; Opoku, 2018).

efore adverse effects of substances can be seen, there must be a dose-response level that is  
ough to warrant an adverse health impact and as such, moderation is vital (World Health  
rganisation, 2014). Sensitizing adolescents on the use of substances should be taken seriously  
cause once an adolescent begins to use any substance, he or she starts on the pathway to  
iction. Scientists have it that the more one takes substances, the more dependent they become

them, thus, the loss of their ability to control its intake even in the face of adverse effects, frequently leading to an addiction. Efforts needed to control the use of substances by youth have to be greatly complemented by parents and guardians. The community's help in restricting the use of such substances and adopting tailor made interventions and treatment that suits the substance burden of the township and individuals as well as motivation for treatment could greatly be official in controlling substance abuse and sustaining recovery among adolescents (NIDA, 2018). National policies on substances use can be instrumental in reducing the use of substances among adolescents. In Vietnam, such steps have been taken due to the highly prevalent use of opium, alcohol and other illicit drugs. The governing bodies and stakeholders implemented policies and regulations that controlled the availability, sale and consumption of such substances and by persons younger than eighteen years (Do et al., 2019).

### **1.5. Mental health among adolescents**

Mental health is characterized by emotional, psychological and social well-being which plays indispensable roles in the overall health of individuals (Brailovskaia, Teismann, & Margraf, 2018) and this is the more reason why the World Health Organization seeks to encourage the governance and policy implementation of such a delicate aspect of life. By 2020, WHO seeks to improve upon its leadership that steers mental health in its member countries as well as to advance available services that care for people with various mental health needs. As part of their strategies, WHO seeks to have guidelines governing mental health in its member countries which will safeguard the mental health and welfare of citizens. There will be increased and improved mental health service delivery which will be easier to access with more trained mental health workers and increased social support for those who need it. These should lead to an overall decrease in deaths by suicide

really (Hatew, 2014). Depression and anxiety play instrumental roles in the disability adjusted years among adolescents in developed countries with behavioral disorders setting the tone for unfulfilled life in adulthood (Branberg & Burdovic-Andreas, 2019). In Ghana, 37.5% of Senior High School students experienced depression, stress and fluctuating moods for at least two weeks, affecting their daily routine. About 14.6% of students attempted suicide in the past year with 15.4% missing their suicide attempt. It is however reported that globally, about four million adolescents attempt suicide annually (Owusu, 2008).

Emotional instability peaks during adolescence and is evident in how adolescents behave. Increase in anxiety and depression is most common in the mid-adolescence period as teenagers are faced with so many decisions to make. If positive coping mechanisms are not taken advantage of, some adolescents tend to internalize. Although it is normal for adolescents to experience constant mood swings, depression and sadness, the daily activities of adolescents can be affected and it is important that parents and adults around them give the needed support as they try to figure themselves out. A welcoming environment must be created so that adolescents can air their views, ask questions and get positive feedback from trusted friends. In the absence of trusted social support, adolescents will consequently turn to others for the wrong support and advice. Female adolescents experienced poorer mental health status compared to their male counterparts (Gloriah Pevakin, 2017; Merrill & Liang, 2019).

Mental health help seeking behaviors among adolescents and adults in general are not encouraging because of stigma associated with seeking help, inaccessibility of mental health facilities and services and total ignorance of the existence of such services (Gloriah & Pevakin, 2017; Liu et al., 2018; Smith-Francis & Evans-Agnew, 2017). A study revealed that Africans underutilize mental health services and this is a challenge considering the prevalence of mental health disorders among

population. Black adolescents report higher suicidal rates, poor behavioral conduct yet have an unmet need for their mental health issues which cause an eventual dropping out of school, juvenile imprisonment and suicide. Places with some form of formal mental health assistance were not used because adolescents felt a sense of shame and low self-esteem in considering the use of such facilities either because friends will make fun of them or relatives will penalize them for not asking them enough to help. Parents also feel stigmatized when they took their wards to seek mental health assistance because of the societal perception surrounding mental health issues which usually could have been easily tackled with the help of a qualified personnel (Planey, Monell, Green, & Walker, 2019). It is also important to note that difficulty initiation or maintaining sleep for reasons such as substance abuse, alcohol or social media reasons are enough to entertain suicidal thoughts among adolescents. Notably, adolescents who had one sleep problem or another are sometimes associated with suicidal thoughts and behavior and adolescents have been advised to take factors that adversely affect their sleep seriously to enable them enjoy a sound mind (Wong & Serwer, 2012).

#### **2.6. Social media and substance use among adolescents**

More than 70% of the youth globally are actively involved in the extensive use of social media applications with each user spending significant amount of time on the media (Branzberg & Burdovic-Andreas, 2019). Social media influences the use of alcohol and drugs among adolescents and studies suggest that greater use of social media has shown greater use of substances (Branzberg & Burdovic-Andreas, 2019; Groth et al., 2017; Hakkaron et al., 2019). It has made it easier to market and sell drugs online without the vendors having to be physically present to be identified or negatively branded. Due to its prevalent use, social media users are able

share information on illegal substances despite the risks that come with it. In Denmark, "street dealing" which is the term used for the online drug market is common and in Norway, it is called "Snapchat drugs". Adolescents can easily get involved in illegalities over social media as marketers on social media publicize information on the brand of drugs available at the time and where they can be accessed. These drug markets could be open (public) and closed (private). Social media makes it easier to access a huge audience however some drug marketing sites require using encrypted routes to have access to buyers and sellers of drugs (Bakken & Demant, 2019). Our adolescents confirmed that inappropriate content on smoking was available to them through social media platforms (Radovic et al., 2017) and 66% of social media posts had contents on alcohol. The more such posts on alcohol and other substances are beheld and discussed among adolescents and their peers, the more likely they are to indulge in its use (Giroth et al., 2017; Akavan et al., 2019). Due to the novel and unsafe exposures to substance use on social media, adolescents are more vulnerable than ever to influences regarding its use. With celebrities endorsing the use of substances on social media sites by posting graphic content where their young fans see them "high" on a number of substances, adolescents mistakenly see it as appropriate to follow suite. Adolescents who use no social media platforms or used them less were more likely to abstain from using substances that could be detrimental to their health and well-being. Social media use could also lead to various mental health issues that trigger the use of substances (Haid, 2019). People's social media posts have been found to be a predictor of their behaviors and attitudes in real life which is also determined to an extent by the content they view online socially if the source is reliable. In addition, posts on social media are over exaggerated and have potential to falsely entice young people into acts that may actually be misleading. Considering the affordable but massive influence social media has lately especially on the youth, it can be used

as a tool to effect positive attitudes and change among the "future leaders" of our time especially if they can relate to the sources, for instance their peers or trusted celebrities (Westgate & Holliday, 2016).

This makes it vital for measures to be put in place to curb illicit use of substances through more research on the issue and subsequent policy formation. Since humans are naturally afraid to commit crime, the youth are most likely to reduce their use of substances if there are more anti-substance policies that regulate e-content on such substances. This will compete with e-content that promote the use of substances among teenagers. The presence of increased taxation on substances and the availability of easy to read and understand materials which educate the youth on their adverse effects will reduce greatly if not eliminate the use of substances among adolescents (Radovic et al., 2017; Majumdar, Chou, Cruz, & Unger, 2019). These measures should be done in perspective to avoid ineffectiveness of anti-substance messages such as targeting the wrong audience which had the potential to rather encourage the use of drugs among the youth. Socialization agents such as parents, positive influencing celebrities, teachers, religious leaders who play strong roles in the upbringing of youth should be admonished to avoid sending mixed signals and indirect messages through their everyday actions so that the youth can practically emulate safer behaviors from them (Branborg & Radovic-Andreas, 2019; Yang et al., 2019).

### **2.7. Social media and mental health**

Mental health issues begin in the early years of teenagers and has the potential of causing ill-health among them (Oppong Asante & Kagbey, 2019). Previous studies suggest potentially meaningful links between active social media use and mental health status of youth (Gleason & Prevalin, 2017; Akkavan et al., 2019; Merrill & Liang, 2019; Radovic et al., 2017; Schlosser, 2020). Adolescents,

As haven't completed their process of neural development can be very sensitive to derogatory remarks and unknowingly adopt some unhealthy defensive behavior patterns as compared to adults. This makes them vulnerable on social media platforms where they seek to be accepted by the online community. Thus, adolescents go any length to maintain an "appealing" profile which may be contrary to their personal values which are still being molded. This places a huge demand on them to present the best and yet, non-existent versions of themselves. Furthermore, adolescents who are mostly on social media platforms especially at night are exposed to "blue light" from their digital devices which affect their sleep cycle and hormone secretion. The light from mobile phones is not natural and scientists suggest that at bedtime such devices should be kept at bay to prevent disruption to sleep cycle to avoid placing unnecessary burden on the mental health status of the youth from insomnia related causes (Gibson & Prevalin, 2017; Merrill & Liang, 2019; Park et al., 2019; Schlosser, 2020).

A study among grade nine to twelve students in the USA reported that adolescents who spent more time on social media slept for shorter hours. And they were also the ones with poorer mental health status. The short sleep stemmed either from difficulty initiating or continuing sleep due to over stimulation from digital devices or going to sleep at later hours after engagements on social media affairs and having to wake up at the usual time for school (Merrill & Liang, 2019). Mental health issues have detrimental effects on adolescents and society at large. The specific social media application used among adolescents determines the intensity of mental health effects they experience. For instance, a site such as LinkedIn is used for professional purposes as opposed to Instagram and Facebook which are less formal sites and are used by adolescents to share personal information and media. It has been reported that more Africans use Instagram as compared to other sites with 76% of adolescents using Instagram and 73% using snapchat and other informal sites

h as Facebook and twitter. This implies that some adolescents use multiple social media sites which is likely to promote risk behavior and affect mental health due to uncontrolled content on these platforms (Bakkaravan et al., 2019; Merrill & Liang, 2019). Facebook is one of the most widely used social media. A study speculated that Facebook for instance poorly aided stress recovery and was also the reason for negative emotions such as shame and feeling inadequate whenever threats to one's social esteem was present. The unfavorable comparison of others to self when using such platform offers the avenue for acute stress and low self-esteem. When used discretionally however, social media platforms can buffer stress, improve self-esteem, build social support systems and improve overall Quality of Life (QoL) (Rus & Tiemenova, 2018). Increase in time spent on social media reduces direct physical interactions that diminish the effectiveness of active social support systems in the physical environment, thereby aggravating depression and increasing dependency on such platforms. Unfavorable social media comparison also arises from the limited social media use thereby inducing despair and sadness (Branborg & Bardszovic-Andreas, 2019). Another source of depression and anxiety among young social media users is cyberbullying, which is the deliberate maltreatment of peers through digital devices through sending messages or texts to threaten, mortify or disgrace them. Cyberbullying has been associated with suicidal ideation among teenagers who are not buoyant to its effects, but then adolescents with positive mental health standing have been shown to have resilience to cyberbullying (Bralovskaia et al.,

### 1.8. Substance use and mental health

Adolescents' substance use obviously has negative effects on their psychological development, academic performance and overall mental health (James, Kristjánsson, & Sigláfóttir, 2011). Substance use has caused effects such as depression, anxiety, and mental health disorders among adolescents and also affects their academic performance (Baidem, Graaf, et al., 2019). As the youth engage in substance use early in life, they are unable to avoid the ripple effects of poor psychological well-being, physical injury and bankruptcy (Hranborg & Bardarov Andras, 2019). Youth also face the consequences of conduct issues such as crime, violence and sexual immorality. In a study among adolescents, 34% were of the view that using a substance once or twice was not enough to warrant an addictive response and as such, 23% were likely to accept an invitation to initiate the use of drugs. This is an indication that the youth have fallacies and misconceptions concerning the use of substances because a single dose of an illicit or licit drug is potent enough to cause a dependency effect and adolescents therefore need education on the usage of substances and its potential for impairment (Do et al., 2019).

Heroin, alcohol and tobacco have been reported to be highly addictive which significantly affects how the brain perceives stress and reward, thereby enhancing the dependency cycle on such substances (Opoku, 2018; Serru, Fatana, Denis, Swendsen, & Auriacombe, 2018; Srivastava & Ghosh, 2019). Psychoactive drugs are known for their impact on the Central Nervous System (CNS) by altering brain functioning and leading to changes in mood (causing depression and anxiety), consciousness and behavior. Psychoactive drugs include tobacco and alcohol. Such substances have been associated with various sleep-related disorders and daytime consequences such as fatigue which diminishes an individual's potential for satisfactory work output. In the metabolism of alcohol for example, acetaldehyde which is the most harmful by-product has been found to

significantly affect sleep patterns in animals. In adolescents however, use of alcohol has been associated with fatigue and insomnia which indicate a poor mental health status with an improvement in sleep quality when alcohol consumption was significantly reduced. Smoking has also been seen to adversely affect sleep quality in adolescents and that individuals smoked more following a period of sleep disturbance and such effects were more observed among African and Asians as compared to other Western communities. As smokers perceive a sense of relief from insomnia induced fatigue any time they smoke, their dependence on smoking only increases with time. Some sleep related issues recorded include inhibitions in starting the sleep process, the ability to enjoy an uninterrupted sleep pattern without having to wake up earlier than required and snoring which is related with Obstructive Sleep Apnea (OSA). These inevitably leads to memory and concentration problems for both young and old during the daytime. To prove its addictive potentials, studies have shown that people who have sleep disorders or insomnia relate towards alcohol as a preference over non-alcoholic options. Despite the minimum requirement of six hours of sleep, alcohol dependent persons are unable to cope with insomnia and therefore relapse to their alcohol intake patterns if their coping mechanisms don't seem effective (Mrich et al., 1999; Cohn, Foster, & Peters, 2003; He, Taylor, Thakur, & Chakravorty, 2019; van den et al., 2011; NIDA, 2014; Patterson & Ashare, 2019; Peltier, Lee, Ma, Businella, & Indrar, 2017).

Tramadol is a substance with features of an opioid. Even though there is no epidemiological data on the excessive use of tramadol in Ghana, it is still seen as a major public health issue which needs to be tackled with all seriousness. Tramadol has a tendency to cause dependence among new users who had no recent history of abuse of the substance and therefore has been tagged a controlled substance by the Ghana Food and Drugs Authority (FDA). Users of tramadol report a

eling of excitement, hope and improved attentiveness whenever they use tramadol. Yet still users use the substance to improve their sexual performance or renew their strength after engaging in labor intensive work. While most users reported that it was a useful antidepressant, users of tramadol report side effects of the drug which included irritability, anxiety and depression. It is noteworthy that alcohol and tramadol both affect the central nervous system which alters brain function and increases depression and suicide ideation among its users (Food and Drug Administration, 2018; Fusconi et al., 2019). Statistics from the Youth Risk Behavior Surveillance System revealed that 17% of adolescents who used substances had considered suicide with 14.6% planning it an attempt and 8.6% actually attempting the act. Some substances have been deliberately used to commit suicide by some adolescents while some others simply cause anxiety and depressive symptoms that could eventually lead to suicide ideation among the youth. It has been suggested that some adolescents combine opioids with alcohol or other substances such as tobacco and cannabis which have all been associated with poor mental health status among youth. And strong relationships have been established between the use of alcohol, tobacco, and other substances with suicidal behavior among teenagers (Baiden, Graaf, et al., 2019).

### **2.9. Sociodemographic factors that affect social media use, substance use and mental health among adolescents**

According to WHO, more females abstain from alcohol as opposed to their male counterparts with 5 % of deaths among males being contributed by alcohol and 4.0% of all female deaths being caused by alcohol (World Health Organisation, 2014). More males have been reported to have alcohol dependency as compared to females (Cohn et al., 2003) with more boys than girls likely to engage in alcohol consumption (Blowell, Leyns, Hogan, Beckner, & Zivdinsky, 2010; Oppong Aanteh & Kagbey, 2019), while people from lower socio-economic class were more likely to

and have complications from such activities (Page et al., 2011; Polster et al., 2017). It has been reported that social media affected fear of crime in males as opposed to females who are generally "full of fear" to float rules (Istravia et al., 2017). It is estimated that in Ghana, more males than females engage in alcohol and substance abuse as compared to their female counterparts (Agyemang et al., 2017; Oweh & Pevonia, 2017; Owusu, 2008). Even though smoking levels in America and Europe are lower than the rate in Africa, Africa has significantly higher smoking rates as compared to the rest of the world. Generally, more boys are found to smoke as opposed to girls though the rising prevalence of smoking among girls is currently a growing public health concern (Page et al., 2011). Cultural and religious factors play a role in the use of substances among the youth (Yang et al., 2017).

Parental control and supervision of parents played a significant role in whether or not adolescents used substances and females were more likely to have sound perceptions about the dangers of indulging in substance abuse as opposed to males. Men were also known to suffer more peer influence as far as substance misuse was concerned. Adolescents who resided in rural settlements were less likely to engage in risky substance use as compared to their urban counterparts and adolescents' whose parents used substances were more likely to engage in their use because of the perceived "normalcy" associated with use by a trusted figure. Younger people had less desirable attitudes towards substances and freely participated in its use as compared to older people and this could be attributed to the novelty and peer effect on the side of younger people (Do et al., 2019) and younger adolescents as opposed to older adolescents had poorer mental health status (Merrill & Liang, 2019). In West Africa, findings suggest that adolescents engage in heavy drinking as opposed to the older generation (World Health Organisation, 2014). Adolescent development and overall health can be affected by their self-concept, behavior, social support which includes relatives,

comparisons, educational institutions, community, governance of the community and the income status of their support systems (Chung, Kim, & Lee, 2018).

Experimentation was one of the reasons for the use of alcohol and substances among the youth (Ayong Asante & Kagbey, 2019) and a study revealed that 39.3% of adolescents had experimentally drunk alcohol with 12.7% engaged in heavy episodic drinking and 4.1 % had used other drugs. Higher socio-economic status showed less use of substances and alcohol among adolescents as opposed to those who were not materially affluent. Adolescents who lived in a nuclear family setting also reported less incidence of substance use with those who lived without one or both parents reporting higher use of substances and alcohol. Also, adolescents with poor academic achievement were strongly associated with substance use and alcoholism (Doku et al., 2012). Adolescents who stayed with their parents had a sense of belonging and consequently had a lower incidence of depression as compared to their colleagues who did not. Also, those adolescents who had a strong sense of religion or belief in God were less likely to experience depression and substance use (Bojars et al., 2019). For every female that uses substances, there are 3 males that use substances (Ehiamen, Sandow, Atchabah, Kpankpan & Asinktiwen 2018).

## Conclusion

The examination and appraisal of literature in this section sought to throw more light on the trends and intricacies of social media, substance use and mental health in the Ghanaian region, Africa and the World at large. Evidence from previous studies suggests that adolescents are sometimes faced with choices which they may not be emotionally mature to handle; thus, leading them to make wrong decisions that could adversely affect their health outcomes even long after they have emerged as adults. The rise in the use of social media has made adolescents privy to a vast collection of substances such as alcohol, tobacco and tramadol, leading to their increased chances

Considering their use. High exposure to social media on its own has also been proven to initiate mental health issues among adolescents. Substance use has been linked to adverse mental health outcomes and mental health of an individual can lead to the use of substances. Sociodemographic factors such as the age, sex and religion of an adolescent, presence or absence of parents and parental educational background have also been known to influence the use of social media, substance use and mental health of adolescents. Overall, it has been established that giving adolescents the attention they require can help to lessen hostile consequences from the appropriate exposure to social media, substance use and mental health.

## CHAPTER THREE

### 3. METHODS

#### 3.1. Introduction

This chapter provides information on the research design, the participants and study area that were used for this study. Information is also provided on the strategies that were adopted, data collection procedures, tools and analysis employed as well as the ethical issues that were considered in the study.

#### 3.2. Study Area

The study was conducted in the La Nkwantangan Madina Municipality (LANMMA) in the Accra Metropolitan District of Ghana. La Nkwantangan Madina Municipality was initially a part of the Accra East District but in 2012, it was established as an independent district by Legislative Instrument (L.I) 2131. A decade ago, the census recorded approximately 112,000 inhabitants in the La Nkwantangan Madina Municipal District with about 48% males and 52% females. Currently however, the LANMMA has about 140,000 inhabitants. It is enclosed by the Ga East Municipality to the west, to the East is the Adentan Municipality and to the South is the Accra Metropolitan Assembly. Electoral areas in the Municipality include the Oyarifa, Pantang, North Lagon, Madina West, West Adentan, Dandla, Tatanaa, Social Welfare and Nkwantangan electoral areas. La Nkwantangan Madina Municipality is mainly an urban settlement with collections of rural areas which are speedily evolving into urban towns. Urban communities of residence in the municipality include North Lagon, Okataaba and Akatsi Aboe whiles Oyarifa, Ayimensah, Siman, Dandla, Pantang and Otinibi make up the rural township of the La Nkwantangan Madina municipality. The total land size of La Nkwantangan Madina Municipal Area is 166square

ometers (sq. km) (LANMMA, 2018).

As part of its health facilities, the municipality has the Pantang Hospital which is known for its mental health services, about 4 public and 17 private hospitals and clinics, 2 Community Based Health Planning (CHPS) compounds and 2 health centers (LANMMA, 2018). Youth centers in the municipality include the Youth Empowerment Synergy which is a Non-Governmental Organization (NGO) interested in Youth research, grooming and preparing youth for a smooth transition into adulthood located in Madina.

There are about 24,269 households in all within the municipality and on average, the greatest proportion of inhabitants are children, adolescents and young adults, with about 4 inhabitants per household. The percentage of married people in the area is 51% with about 3% widows, 3% divorced and 2% separated. The educated in the Municipality make up 91% with more literate males than females. The least among the literate group could at least speak and write English. However, the proportion of the population still in school who are children, adolescents and young adults is 41,748 (37.3%). This figure is almost similar to the total number of young people in the municipality. Students in the area make up over 59% of the economically inactive population in the municipality. There is a total of about 2.7% of persons living with disability (PLWD) ranging from sight to emotional and intellectual disabilities (Ghana Statistical Service, 2014).

Almost 86% of the population who are over 11 years possess mobile phones with over 20,000 people who are 12 years or more having easy access to the internet. Almost 25% of households have laptops or desktop computers.

Professions of inhabitants in the area included apprenticeships, technicians, art workers, banking, fashion services, hotel services, restaurant services and retailing of goods. Commercial activities are mainly carried out in Madina which is the capital town of the Municipality.

The study was conducted in the Madina township. Madina is the hub where most of the communities in the La Nkwantang Madina Municipality converged for trading, commercial activities, schooling and transport services among others. The population present at Madina is a very diverse one including some foreign immigrants from countries such as Niger, Togo, Burkina Faso, Ivory Coast, Nigeria, Liberia among others (Ghana Statistical Service, 2014). Some local immigrants from the Northern parts of Ghana and other regions in the country also converge there for various trading or transportation services (Ghana Statistical Service, 2014). There is also a generous mix of individuals from various socio-economic classes who reside in localities ranging from Madina estates to Firestone, to the Madina Zongo and REDCO among others. Madina is inhabited significantly by individuals from various religious backgrounds such as Christianity, Islam and Hindu. Madina is the 12<sup>th</sup> most populated community in Ghana with a total of 137,162 people.

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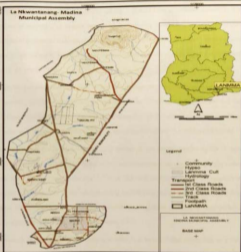


Figure 3.2: Map of La Nkwantangan Madina Municipality (source: LANMMA)

### 3.1. Study Design

exploratory-descriptive study design was employed by using a qualitative approach in lecting and analyzing data. Qualitative enquiry is distinct from quantitative research in that, qualitative research is an enquiry process of understanding based on distinct methodological ditions of inquiry that explore a social or human problem. The research builds a complex holistic nare, analyses words, reports, detailed views of informants and conducted study in the natural ting" (Creswell, 1998).

Qualitative research was most suitable for this study because of its exploratory nature and approach providing detailed understanding of concepts in the social sciences; given the fact that individuals have unique perspectives and understanding of the interactions between various mponents of their environment (in this case, social media, substance use and mental health).

Exploratory study design was used in the study because despite the fact that the concept of social dia use, substance use, mental health and their interrelations have been widely researched, much search has not been done on the topic in Ghana. This research design enabled the researcher to scover new dimensions of the concepts being studied which would otherwise not have been own. The study design also enabled a deeper understanding on ways in which the concepts being adied play out in the research setting (Stebbins, 2001).

Exploratory study design in itself is unable to result in definite and final conclusions on a topic; however, it affords the researcher the opportunity to gain a deeper understanding and specialization n an issue, which was a gap the study sought to fill (Bosa, 2018).

Descriptive study design was used in this study to report exactly and methodologically the cepts of the study with regards to the study participants. As Lambert & Lambert puts it, a escriptive study design allows one to study and report on a phenomenon as it occurs in its natural

...without the researcher manipulating or focusing strictly on any theoretical viewpoint (Lambert & Lambert, 2012)

### 3.4. Study Population

The study participants were adolescents who live in the Madina community, the capital town of La Nkwantang Madina Municipality. La Nkwantang has about 43,651 young people which is almost 40% of its entire population and 144 schools which offer basic education and 13 Senior High Schools (SHS). There are about 17 Junior High Schools in the community with an average student population of 166. These indicate that there are at least, 2,822 adolescents in the town (Ghana Statistical Service, 2014; LANMMA, 2018).

### 3.5. Inclusion and Exclusion Criteria

#### 3.5.1. Inclusion Criteria

When an adolescent was included in the study, he or she was between the ages of 10 and 19, lived in the La Nkwantang Madina Municipality for at least 6 months and used social media for at least 3 months.

Six months was chosen as the minimum duration for residence in the municipality because for one to be influenced by peers or get used to the culture of the municipality an adolescent should have resided in the municipality for a significant period of time to have possibly made friends.

Three months of social media use was deemed enough if an adolescent was going to be exposed to substance use advertisements and mental health outcomes from social media use.

### 3.5.2. Exclusion Criteria

Adolescents who were between the ages of 10 and 19 years, who lived in the La Nkwantanang Madina Municipality for at least 6 months and used social media for more than 3 months but were unwilling and available to partake in the study were excluded from the study.

## 3.6. Sampling

### 3.6.1. Sampling method and procedure

Purposive sampling was done based on the inclusion criteria to select participants for the study. Purposive sampling was done in order to select participants with the characteristics being studied which were the use of social media and residence in the La Nkwantanang Madina Municipality. Participants were selected and interviewed until saturation was reached. Saturation generally refers when no new data is being identified with subsequent data collection methods. Even though a large or small sample size is not an assurance of saturation, it has been found that the ability of the researcher to obtain relevant and rich information as opposed to lengthy but irrelevant information is what aids in truly reaching saturation in a qualitative study (Fusch & Ness, 2015; Weller et al., 2018). With the help of opinion leaders in the study area, households with adolescents who met the inclusion criteria were identified and selected. Twelve participants participated in the study. Each interview lasted for about 20 minutes and they were conducted in locations suggested by participants with their convenience and safety in mind.

### 3.7. Data collection tools

semi-structured interview guide was used for data collection (Appendix). The interview was conducted in the English, Ga and Twi Languages according to which language participants listened and spoke best. The tool collected socio - demographic information of participants, their parental information, information to assess their use of social media applications, their use of smartphones and their mental health issues. Interviews were tape recorded and transcribed. Probing questions were asked based on the responses given by participants in order to obtain clarity of points from interviewees. No research assistants were used during data collection.

### 3.8. Data processing and analysis

Interviews were tape recorded and the audio files were labelled appropriately. The recorded interviews were transcribed verbatim. The transcripts obtained were compared to the audio files to ensure that no vital information was missing. The transcripts were read several times in order to become familiar with the data. Coding of the transcripts was done in relation to the research objectives. The codes obtained were scrutinized by the academic supervisor to ensure credibility and trustworthiness of the study. These codes were then classified into themes. Thematic analysis was used to analyze the data in line with the specific objectives of the study. Thematic analysis refers to a process of recognizing, scrutinizing and giving an account of patterns within data (Braun & Clarke, 2006). In order to generate quality results, the following phases were followed: getting familiar with the data, extracting initial codes, formulating themes out of generated codes, viewing themes and defining themes and producing the final report.

### 3.9. Quality control

interview guide was developed with the research questions as the controlling focus. Pretesting the interview guide was done with adolescents in the Adentan Municipality with four teachers, to assess the suitability and easy understanding of the questions by participants. The review guide was then revised accordingly. To ensure quality of transcripts, transcribed audio s were replayed while the initial transcript was read simultaneously to ensure that verbatim inscription was done.

enhance credibility, reviews of the transcribed interviews, thematic analysis and final reports in the study were done by the researcher's academic supervisor.

**flexibility:** Given the fact that beliefs and already existing perceptions of the researcher could not the study process and findings, the academic supervisor was consulted with at every stage of the research.

### 3.10. Ethical considerations

tical approval was obtained from the Ghana Health Service Ethics Review Committee (HSERC) prior to data collection with approval number, GHSERC 023/03/20. Adolescents who met the inclusion criteria and were willing to undertake the survey, irrespective of their age, sex, ethnicity or nationality were included in the study. All participants were permitted to opt out of the study at any point during the survey.

Participants who met the inclusion criteria but strongly opted out of the study were excluded as well. The investigator had no conflict of interest in the study.

**anonymity:** No personal identifying information were taken from participants apart from their names. Pseudo names were agreed upon by participants by which they were referred to in the interviews.

**informed consent:** Informed consent was obtained from adolescents aged 18 and above. Before giving consent, the purpose of the study was fully explained to each participant and those who were willing to undertake the study were made to complete a consent form by appending their signature.

**Parental Consent and Assent:** Parental consent was obtained from parents or guardians of adolescents who were less than 18 years as evidence of their permission to allow their wards to take part in the study. Parental consent was obtained before adolescents were enrolled to participate in the study. Refusal on the part of any parent or guardian to allow their ward(s) to partake in the study was duly respected and such adolescents were not given an assent form; they were excluded from the study. It is only after parental consent was sought that an assent was obtained from the adolescents involved.

**Privacy:** The dates, time and venues for the interviews were decided on by the participants with regards to their convenience. It was ensured that the chosen venue was safe for both the researcher and participant and also provided the needed privacy to enable participants freely express themselves.

**Confidentiality:** All participants were assured of strict confidentiality, data safety and appropriate use of their responses. Audio tapes and transcripts obtained from the study were kept under lock and key and were accessed by the research team only.

**Benefits:** This study yielded useful information on the perspectives and understanding of adolescents as far as social media, substance use and mental health is concerned. This information is of direct benefit to parents and guardians of adolescents in the La Nkwantangina Municipality and Ghana at large. This is because, parents and guardians as well as policy

cers and stakeholders in adolescent issues will gain better understanding of the present realities in the world of adolescents and their social media interactions.

**Key:** There were no risks for adolescents who participated in the study and participants who experienced any form of discomfort from the study were allowed to opt out of the study at any time they desired.

**Compensation to participants:** Adolescents who participated in the study were given one (1) notebook and a pen each as compensation for their time and contribution towards the study.

### 3.11. COVID-19 Mitigation measures

1. Participants were made to wash their hands with soap under running water or disinfect their hands with alcohol-based hand-sanitizers before and after the study.
2. The use of facemasks was ensured before the participants entered the study sites.
3. Participants who arrived at the study site(s) without a facemask were offered one facemask each.
4. All participants were encouraged to wear their facemasks till they left the study site.
5. Before the study, participants were taught how to appropriately maintain reusable facemasks. Demonstrations were done to show participants how to wear and take off their facemasks (both reusable and disposable types).
6. Facemasks distributed to participants were not sold to them. Such costs were borne by the researcher.
7. A distance of at least 2 meters was observed between the participants and research team during the research procedure.
8. The researcher at all times during the study observed the use of facemasks.

9. Before and after the study, the hands of the researcher were washed with soap and water and/or alcohol-based hand sanitizer.
10. Disposable gloves were used by the researcher after each hand wash before consent and assent forms were distributed to study participants.
11. Further national directives given in the course of time, were strictly adhered to as far as participants and the researcher were concerned.

## CHAPTER FOUR

### 4. RESULTS

#### 4.1. Introduction

This chapter presents the results of the study and will outline the sociodemographic characteristics of study participants; the perceptions of participants about social media and substance use; the understanding and experiences of substance use and mental illness among participants; and the impact of social media use and socio-demographic factors on the mental health status of study participants.

#### 4.2. Socio-demographic features of in-depth interview respondents

A total of 12 participants were recruited for the in-depth interviews. Out of the 12 respondents, 6 were females and 6 were males with ages ranging from 14 to 18 years. Three of the participants were Muslims, while 3 were Christians and 1 did not belong to any religion. Most of the participants had both parents still alive, with 1 participant having only the mother alive. Majority of these participants lived with both their mother and father. The others either lived with their mothers (2 participants) or their father alone (1 participant). All participants were students (table 4.2a).

Table 4.2a: Socio-demographic features of participants

Participant pseudonym	Gender	Age (years)	Religion	Parents Alive	Who participants live with
mark	Male	16	Christian	Both	Parents and siblings
terrald	Female	18	Christian	Both	Parents and siblings
oban	Male	17	Christian	Both	Father
willmore	Male	17	Christian	Both	Parents and siblings
may	Male	16	Christian	Both	Parents
aisy	Female	15	Muslim	Both	Parents
erky	Female	14	Muslim	Both	Grandmother
layah	Female	14	Christian	Mother	Grandfather
ark	Male	18	Non-religious	Both	Parents
ved	Male	16	Christian	Both	Parents
arbir	Female	16	Christian	Both	Parents
ill	Female	17	Muslim	Both	Parents

not parents of the participants did not use substances. Most participants knew of either friends or mentors on social media who engaged in substance use with a few of the participants reporting use of substances (alcohol) at some time in their lives. The educational backgrounds of parents of participants varied from Junior High School (JHS) to tertiary. A third of the participants reported low social media use, with a considerable number reporting moderate to high social media use (Table 4.2b).

Table 4.20: Social media use, substance use and parental educational background

part num	Parental use of substances	Friend/ mentor Use of substances	Participant's use of substances	Parental educational background (Father/mother)	Participant's Average daily social media use.
pk	None	None	None	Masters/First degree	1 hour (Low use)
plld	None	Yes	None	Masters/First degree	2 hours (Moderate use)
pm	None	Yes	Alcohol	First degree/First degree	3 hours (High use)
psw	None	Yes	None	PhD/Masters	More than 3 hours (High use)
py	Father (alcohol)	Yes	Alcohol	BSc/MS	3 hours (Moderate use)
ry	None	None	None	First degree (BSc)	1 hour (Low use)
ky	None	None	None	MS/unknown	1 hour (Low use)
qth	None	Yes	None	Unknown/ BSc	2hours (Moderate use)
rh	None	None	Alcohol	BSc BSc	More than 4 Hours (High Use)
sd	Parents (Alcohol)	Unknown	Alcohol	Unknown	4 hours (High use)
td	None	Yes	None	MS/ BSc	3 hours (Moderate use)
td	None	No	None	Degree/Degree	2 hours (Low use)

most prevalent social media platforms used by participants were Facebook, WhatsApp and Telegram. Few of the participants used other social media platforms like Tik Tok, Snapchat, Instagram and YouTube.

#### 4.3. Objective 1: Perceptions of Participants About Social Media and Substance Use

Participants were asked questions concerning their general perceptions about social media, and it was deduced from answers given that, "Social media requires personal mastery" and "Social media presents pseudo-friends." These emerging themes spoke volumes of the role of self-identity in the virtual community.

The ability to decide what outcomes should be obtained from the use of social media and the ability to realize those outcomes despite the threats of distractions is important if one is going to have dominance over their online environment. Social media on its own cannot determine the outcomes of an individual's time and engagement online; thus, one needs to demonstrate a form of personal mastery.

*"It is what you want it to be. If you want it to be, if you want it to benefit you, it will benefit you in a lot of ways."* (Mark, 16years male)

If social media is going to be for the good of an individual, then one must be able to exercise some form of self-control in terms of the time spent and the content viewed;

*"I can stop at my own time, it's not like eh I'm addictive."* (Philmore, 17years male)

*"Sometimes, people use social media maybe let's say an advert pops up... there is a limit you have to control yourself and like not go too far"* (Abbas, 17years male)

*"Well, at first, it was difficult but now I can decide to stay off social media and it's okay. I don't have the urge to go back to check messages or any updates..." (Emerald, 18years female).*

personal mastery, one is prepared to deal with pseudo-friends on social media.

*"The friends, woman they are not really real to me I don't really, I don't interest in that" (Abban, 17years male).*

respondents defined social media as an avenue through which they shared content and stories to or from up.

*"Social media, it is like (.3) It is something like when you feel sad, you can share your stories on social media or when someone do something you can share with your friends on social media." (Stacey, 15years female)*

ers also perceived it as a channel for communication;

*"I see it as platform for communication between distant people." (Mark, 16years male)*

*"It's a place where people interact with each other globally and generally." (Emerald, 18years female)*

it still, another definition implied that it was a platform where one could obtain information on real issues.

*"It is a channel for the acquisition of information. That's how I see it. Sometimes, when you want to ascertain the truth behind a rumour, social media can help, and other times too it gives you new information about things going on that you have no idea about." (Lonny, 16years male)*

erent, these did not differ greatly from the perceived benefits they gained from the use of social media. Emerging themes regarding the benefits obtained from social media included “Social media aides education”, “Social media encourages socialization” and “Social media for e-commerce”. According to respondents, social media was very instrumental in helping them acquire all forms of formal and informal modes of instruction, knowledge, enlightenment, skills and beliefs.

*“I get access to information” (Philmore, 17years male)*

*“Sometimes, ( I ) there is some information you need but you can't get it like physically around us, so if you go to social media, by all means you will find, you will get an answer.”*

*(Abban, 17years male)*

Aside the COVID-19 pandemic and its effects on the running of schools, participants also benefited from keeping up with various routes of completing their academic course work.

*“Oh like if you are given homework for instance and like the answer isn't in your text book, you can go to the internet for answers to your questions. and because of the COVID-19 issue too, yeah, you are in the house, so any information you want, you don't have teachers to come and teach you. So you can study on platforms on the internet.” (Mark, 16years male)*

*“I get access to information and during this corona, because of the ... we cannot go to school so we get our assignments through social media.” (Philmore, 17years male)*

It is suggested that, participants made new friends or established new relationships with people through social media, observed the safest route of keeping in touch with loved ones during the

COVID-19 pandemic and interacted with friends, acquaintances and other members of the online community.

*Interviewer: So do you make friends there?*

*Interviewer: Yes " (Mayah, 14years female)*

*"we are in the corona era so it's like everybody is careful and all so I think I just want to play safe and not interact a lot with other people for now and do it online." (Emerald, 18years female)*

*"Because, I only go there for studies and communication with friends." (Mark, 16years male)*

online merchandise" where participants were able to purchase goods online and still be satisfied with them was also spoken of during the interviews;

*"and I have been able to buy stuff online that I am really happy with and yes, I'm very happy." (Emerald, 18years female).*

we can therefore say that social media can be of great value to their users even if such users are adolescents. It is with the above mentioned benefits in mind that participants thought that to make the most of one's time online, a social media user needs to: "Display a high sense of self-awareness", "Make profitable use of social media" and "Moderate the intensity and frequency of social media use".

Participants perceived that social media users needed to display a high sense of good manners and safety while also exhibiting authenticity so that they are true to their beliefs and values.

*"people also take social media as a place to get famous, popular so they get involved in excuse me to say, dirty stuff like insulting others and getting into fights and all. I won't advise that"* (Emerald, 18years female)

*"they should not have interest in what other people are doing. They should be on their own."* (Mayah, 14years female)

*"Yeah, the person should not follow the trend. This recent times, this word like stay queen, you go, get some, borrow some dresses, and get a camera and take video and post it and be like I'm chilling out here and all those stuff which is not real and some people can be pressurized by that and follow and try to do it, which you are not in that space to do it. You don't have that energy or capacity to do it."* (Abban, 17years male)

*Effective demarcation of one's time and setting priorities to accommodate other important commitments and activities in the real world that are not social media related were priceless.*

*"So the time used on social media is really really bad. People are mostly most of the time on social media and I won't advise that. You should at least balance your time; social media, real life, interact with family members, friends... get yourself into things that are outside social media, get to relate to people one on one, and get to read books, like read documentaries"* (Emerald, 18years female)

*"Those who use the social media, I think they should use it on time, they should not use it like every day social media, everyday social media. Because I myself I don't use it every day like that. Today like this I did not use it. I have time to work, I have time to watch television, I have time to learn"* (Stacey, 14years female)

When asked about how adolescents in the study perceived advertisements of substances on social media, themes that emerged included, "Advertisements on substances are bad", "Advertisements on substances can be confusing", "Morally wrong audience" and "pay no attention to advertisements of substances on social media". Respondents indicated that advertisements on substances over social media were unhelpful, in that, they were not good and did not seek to be of help to them in positive ways.

*"they are not good at all." (Freaky, 14years female)*

*"They are bad. They are bad influence as I have seen it" (Lonny, 16years male)*

Others also stated that they were "criticizing" as they had the potential of alluring others into their use.

*"Yeah, because when people see such adverts they could be enticed into its use and they may end up using such substances." (Freaky, 16years female)*

At the same time, others said that these advertisements could either be "misleading", thus, sending the wrong impressions to viewers who may even mistaken substances like alcohol for snacks;

*"For example, there was one kid, when he saw the alcohol on social media, he told his parents that "oh mummy I want to send it for snack to school" ... not knowing, it's alcohol". (Abbas, 17years male)*

Thus, such advertisements could be "deceptive". Participants speculated that because of the profit-driven nature of substance advertisements, they could give false or exaggerated information to their viewers.

*"sometimes they do it in a way you will not know that it is not good for the body. They advertise it very well for you to know that when you drink it, it will help the body".*

*(Phillimore, 17years male)*

Given the fact that social media has a significant presence of users who are less than 18, adolescents on social media are the "wrong targets" for such advertisements. Thus substance advertisements should be directed to people of legal age. It was also indicated however that much cannot be done since there is no way to prevent adolescents from seeing the advertisements on social media, so adolescents should pay no attention to them.

*"I'm just like they should target it to those who are older and of age, but since they don't have the power to do that because it is a general platform, I just move on with what I have to do, I don't pay attention to them that much" (Emerald, 18years female).*

*"Normally they said above from 18 then can take it so I used to ask myself... Above from 18 then you can take it so is not the social Media platform? It's for everybody even from Age 17 ... So then you can't stop the 18 and less than 18 people not to listen to that so they also take it to know what is inside." (Nurb, 18years male)*

It was interesting to know that whiles most of the participants had friends or people they admired or looked up to on social media, participants were not influenced by their behavior. This was probably because they saw such people who could be living miserable lives as bad influence.

*"It's people that I admire from foreign countries that I know have been taking alcohol or tobacco that have made their lives miserable... he used to take alcohol and tobacco, he*

*used to smoke, and all so now his life has become miserable, and I heard he has lung cancer and all those stuff” (Emerald, 18years female)*

*“I want to just drive back from them and not to go closer so that they don’t influence me.” (Philmore, 17years male)*

Concerning their use, respondents perceived that substances had slow but sure effects on their lives which outweighed their benefits. Those who needed to use one form of substance or the other were cautioned to use it wisely, with a doctor’s prescription while exercising self-control.

*“it’s not good because, it hurts, it kills the body and you will not know that it is having effect on you and it will get to a point it will start to have effect.” (Philmore, 17years male)*

*“The person should stop yeah. Even if you can’t stop, at least, try to take like small.” (Abban, 17years male)*

*“you have to use it with a prescription, when they prescribe it to you” (Emerald, 18years female)*

#### **4.4. Objective 2: Understanding and Experience of substance use and mental health**

When it came to how adolescents who participated in the study understood substances, themes that were induced comprised: “Alcohol means strong drinks” “Substances affect behavior and importment”, “Substances can affect biological processes” “Substances could be beneficial” and substance abuse”. Respondents stated that alcohol was any drink that had a high percentage of alcohol that could make an individual boozed and become intoxicated.

*“those drinks that contain some percentage of alcohol. Yeah so when we say alcohol, like the drink has a higher percentage of it.” (Mark, 16years male)*

*"It will make you boozie and get drunk"* (Abban, 17years male)

*"Actually, I didn't take none but I only take soft drinks so alcohol I learnt if you drink, if you drink it too much you'll boozie, or?"* (Nark, 18years male)

can stated that substances had the ability to cause their users lost self-control and insanity thus, altering a person from displaying appropriate behavior and discernment.

*"something that when you take it I don't know but like it makes you do something that you don't think like you can do or like to do".* (Mayah, 14years female)

*"It can make human beings go abnormal and not to think straight."* (Philmore, 17years male)

*"Alcohol it's like, when you take too much alcohol, you can make mad, you can become mad."* (Loney, 16years male)

could be induced from participants' responses such as

*"a pain killer"* (Mark, 16years male)

*"it is a drug"* (Emerald, 18years female)

*"It is something like drugs"* (Fricky, 14years female)

at substances have medicinal properties and hence, the need to be taken in regulated doses when prescribed to avoid any complications.

*"Like, okay, it's required in (.) drugs, yeah, so if someone takes it personally, like only tobacco, it's a form of substance abuse because it is needed in very small quantities. So if*

*the person is taking it, then that means that the person is exceeding the limit.* " (Mark, 16years male)

*"I think it is meant for a particular use but people abuse it."* (Nash, 18years male)

is explains why it is inappropriate for vulnerable populations such as pregnant women, children and lactating mothers and causes adverse health consequences in them.

*"I will say it is not good for children to take it."* (Abban, 17years male)

*"It's not good for people who are pregnant, people below 18 and lactating mothers as well."* (Emerald, 18years female)

it generally, participants think substances are unsafe.

*"That's another hard drug that is not not good at all. Yeah. It's a dangerous thing."* (Abban, 17years male)

some participants stated, some substances were processed from natural products to probably cure a disease condition, or help with certain biological functions (which on their own are useful), however, there is a high rise in its misuse.

*"Interviewer: a plant that is used in most pharmaceutical industries, when they are making drugs for sicknesses"*

*Interviewer: Okay, so when you here about people using tobacco, what does it, like what comes to your mind?*

*Interviewer: ...Substance abuse" (Mark, 16years male)*

and this is only reasonable with some participants putting it that, some substances could be beneficial by helping one to either stay awake for longer or even work harder than usual. While some participants were referring to tramadol which is a synthetic drug, it still comes to reason that if these drugs are used for their rightful purposes, there will be less or no adverse effects.

*"drugs that are taken in to extend, or maybe to work harder or to increase the efficiency of work... so that they can't fall asleep"* (Philmore, 17years male)

*"Somebody will drink it and go and do work hard. Hard work, gidiyadi. He will go and do work gidiyadi"* (Lonny, 16years male)

When the participants who had ever used substances were exposed to substances by their friends, a desire to prove a point coupled with a promised reward led the first participant to the use of substances,

*"Oh me, it was my friends, it was like gambling. I had to drink and take some money. I didn't really take plenty so just like some, yeah... No the alcohol I didn't take plenty. It was just small level... Like the boys were like okay, Abban, let me give you 20 cedis, and just drink like this Igoo 400, half a bottle. (Laughs)"* (Abban, 17years male)

When a desire to fit in and peer pressure made the second participant consume alcohol,

*"My friend was holding it, I thought it was water. Then he gave it to me. Then I realized it was alcohol... they forced me."* (Lonny, 16years male)

When participants were asked how difficult it will be to obtain substances if they wanted, it was realized that substances can be easy to access.

*"Just walk to any club, store where they sell drinks. Just tell them"* (Abban, 17years male)

"where I stay, there are bars and drinking spots around. So if I want to have a taste, I can just go there and buy some" (Mark, 16years male)

was realized that even though they could have easy access to alcohol while being under 18, this is the case because of the profit driven mentality of traders of substances and the lack of policy enforcement regarding who could buy or have access to substances, which makes it easy for descents below 18 to give false but believable reasons for buying alcohol when asked why they are making such purchase.

"Okay me, from what I know, although it's for people under 18, those who sell it, all they are thinking about is their money, so, someone like me, if I enter there, I'm sure, because if I enter there, I look grown so I am not sure they will ask me if I am under 18. Once they are getting their profits from it, they will sell it to me. Yeah." (Mark, 16years male)

"In Ghana here, they will not ask you... If they ask you, now people will just say my uncle sent me or something." (Abbas, 17years male)

"If they ask me, I can say that they are using it for medicine for somebody. (laughs). Yes, they will give me." (Leroy, 18years male)

There also stated that substances were available in their households or by affiliating with people who could serve as middlemen, they could obtain substances if they wanted.

"someone can buy it for you. So that one, it's not a problem getting access to it." (Mark, 16years male)

"I can just walk into a club or a bar and get some or even hook up with some people who are interested" (Emerald, 18years female)

*"Oh, I won't go and look for it cause but some it in the house or..." (Euseb, 16years old male)*

#### **4.5. Objective 3: The roles of social media use and socio-demographic factors on mental health status.**

Generally, participants seemed to have a good mental health. Themes that arose encompassed "mental toughness", "Essentials for direction in life", "Solitude" and "The role of a higher power". Mental toughness was shown to influence how participants faced challenges in life. Codes located under this theme were "Gratitude", "Self-confidence", "Relevance" and "Embracing one's uniqueness". With the presence of parents to provide and a form of religiosity, participants were useful and naturally had a glad disposition, hence, they had a lot of good to hope for.

*"by God's grace, I have parents who provide for me, God has been merciful to me, the fact that I am alive itself is self-explanatory. So I am very very happy." (Mark, 16years female)*

*"I have food to eat, my parents clothe me, I have a place to stay...People don't have the same thing so if I have it I can say I am comfortable with what I have." (Emerald, 18years female)*

*"I have my father, he always brings chop money and my mother cares for me. I am okay and not bad at all." (Barbie, 16years female)*

An ability to believe in one's own capabilities and potentials proved to be crucial to their mental health. That way, when faced with situations that were branded as "tough", these adolescents knew that they were capable of and never belittled themselves even if things went wrong.

*"Because, I am intelligent so when anything comes I can handle"* (Mayah, 14years female)

*"I am an asset."* (Mark, 16years male)

*"I like to take tasks people claim are difficult and I like when people dare me to do things, it pushes me forward and I can do things and I'm like hey did you really do this? Yes, so so, from past experiences, I can say I am very confident."* (Emerald, 18years female)

With feeling of self-confidence was even boosted when participants felt they were needed to play their roles and thus were useful and relevant to their teams.

*"I play drums at church every. Sometimes they can call you, there is a wedding, there is a birthday, so you know that oh so me too at least I am useful, they need me for something."* (Abbas, 17years male)

*"I am a leader first and foremost, and people look up to me for advice and I am a mentor to many people..."* (Mark, 16years male)

*"I help them with assignments and, basically, I am blessed with IT stuff. I know how to fix IT, like I am really into IT stuff and most of my friends in school are not really conversant with that so they come to me for help and I help them. In Bible groups and all, I help, we pray, and so I can really say without me in a group, I don't think they can be able to survive."* (Emerald, 18years female)

Accepting that every individual is unique and flawed simultaneously, and accepting one's strengths while maximizing one's weaknesses gracefully was helpful.

*"I'm also special in my own way and I do things in a different way even, from other people, from my friends."* (Philmore, 17years male)

*"I do things that make me happy"* (Mayah, 14years female)

*"I am a girl and I know what I am looking for in future"* (Stacey, 15years female)

is ability to accept their uniqueness makes it easy for them to have a sense of direction in life either personally:

*"I know what I am looking for in future"* (Stacey, 15years female)

*"I have a purpose in this life"* (Emerald, 18years female)

*"I am one of a kind, (I). The world should look out for me"* (Isid, 17years female)

by parental and elderly guidance:

*"I also have parents who can help me, I have older siblings who have gone through what I am going through so in case of any challenge I can ask them or I can confide in them and they will lead me out."* (Mark, 16years male)

*"Sometimes, I am able to handle them, but sometimes too when I'm not, I just go to my grandpa and tell him"* (Mayah, 14years female)

is not all the time though, that an individual will have people around them. There were instances here some participants reported some form of solitude which was either a deliberate form of self-elation in order to probably recover from a sad mood,

*Interviewer: Okay, so when you are not happy, how do you handle your mood?*

*Interviewee: I always go inside the room and rest.*

*Interviewer: You will be alone?*

*Interviewee: Yes, and on the TV and watch " (Lonny, 16years male)*

is a form of loneliness from being alone simply because one does not have any form of human  
presence even if he or she wanted any.

*"sometimes I don't get anyone to talk to and I am alone at home." (Mayah, 14years  
female)*

In this particular participant who complained of loneliness at times was a female who lived with her  
grandfather.

*"Interviewer: oh ok. So at home, who do you live with?"*

*Interviewee: My grandfather." (Mayah, 14years female)*

Her mother lived in the UK with a Junior High School education and her father was deceased. It  
is understandable therefore that she occasionally had such a feeling. She indicated at a point in  
the interview however, that she was able to do what makes her happy and did not follow the trend.

*"Because when I am alone, I do things that make me happy. Yeah" (Mayah, 14years  
female)*

Though she did not use substances and was a moderate social media user, she was sometimes  
tempted by her friends who used substances.

*"Interviewer: Okay, sometimes, I feel like (L3)*

*Interviewee: It's tempting?"*

*Interviewer: Yeah" (Mayah, 14years female)*

is with the possibility of loneliness and solitude as well as the challenges that are beyond recipients that religiosity comes in. That way, they recognize a God who is able to nurture and provide for them when no one could. In a way reducing the feeling of being anxious, overwhelmed or depressed.

*"God is on my side though... God is in control"* (Mark, 18years male)

*"Sometimes, too, I have to consult elderly people like my parents, and my elder siblings.*

*But most of the time I am able to face it myself by praying..."* (Emerald, 18years female)

When interviewed on how social media affected participants' mental health, 2 themes emerged, "social media can present with emotional instabilities" and "Encouragement to do better."

Social media could make one feel sad, happy or negatively pressured depending on the what one is into contact with. These show how much of a community the online environment is.

*"Even, taking WhatsApp for instance, it's me interacting with my friends and they can piss me off sometimes and do things I don't like so it just puts me out... Yeah, some can make you happy some can make you sad, like something about death, something sad a sad event, so it can change your mood depending on what you see and what you get in touch with"*

(Emerald, 18years female)

*"Someone can go online and get shocked, like, when the person goes to social media in doubt of a rumor and finds out it is true, it can really hurt the person especially if it is bad news such as the death of a loved one or someone they admire..."* (Leony, 16years male)

*"Yes it has before because there was this trend on social media that girls are not supposed to use hair nets anymore because we are upgrading and all so you need hair bonnets. And*

*I checked and I had only hair nets I didn't have a hair bonnet and so it put pressure on me to get one which I haven't yet done, so it's like the pressure and all like the new trend of stuff going on so you feel like you are left behind. So yeah in a way, it pressures you in some way." (Emerald, 18years female)*

*"competition is mostly with you know, from what I have seen, the girls". (Mark, 16years male)*

When using social media, other people are encouraged and motivated to do better, and are therefore inspired to attain great feats or succeed in their endeavors.

*"Mmmm, changing myself for the better, yes, because as human beings we all have people we look up to apart from our parents, so maybe your role model, so when you hear the life story on social media, it makes you change some aspects that are not good. Yeah. So for the positive way and not the negative way." (Mark, 16years male)*

None of the participants ever had thoughts about suicide except for one male participant who spoke out thoughts he had previously encountered when thinking about what happens when one dies.

*"Oh no. Okay it came to mind but I didn't really. I didn't even think of like putting it to practice. Like the effects. It just came like sometimes something had happens and I'm like, so if I am dead, like I was thinking about if I am dead, how will things go and Yeah... Oh I didn't want to kill myself, I was like what if I was dead?" (Abbas, 17years male)*

was observed that religiosity played a role in preventing participants from suicide ideation. Here, participants reasoned out that, God made everybody with a purpose so it was not right to kill one's self and thus, fail in fulfilling that purpose.

*"All I have to say is that, God said we were all born for a purpose. So before they try something like that, they should cast their minds back to why they were born on this earth before they do something like that."* (Mark, 18years male)

*"I will like to tell them that God has a plan for everybody so we should also try to err-err, listen, know what you want and also focus."* (Philmore, 17years male)

Also, aside being made for a purpose, respondents were quick to add the fact that God is willing to help everyone if they will ask Him. Hence, individuals should not attempt to kill themselves because there is always a way out.

*"Even if there is no way, you can pray about it God will help you... You can also go to God in prayer and I can assure you that He is not going to ever ever leave you."* (Emerald, 18years female)

Another participant reasoned out that suicide is a sin.

*"I won't advise that you should err try to execute yourself, like try to make it work you that's also a sin and that's a straight ticket to hell."* (Emerald, 18years female)

Having trusted elders usually parents can help one with anxieties and challenges.

*"Well, yes, no problem is too big. There is a saying that a problem shared is half solved so don't keep it to yourself! The first thing you should do is to get someone you can trust or anyone you feel can help you and just discuss the problem."* (Emerald, 18years female)

## CHAPTER FIVE

### 5. DISCUSSION

#### 5.1. Introduction

This chapter presents the discussion of the study results reported in the previous chapter. The discussion is done in comparison to results from previous studies.

#### 5.2. Perceptions about Social Media Use and Substance Use

In this study, Facebook, WhatsApp and Instagram were the most used social media platforms. These were consistent with studies that emphasized the surge in use of these particular social media networks (Al Zou'bi, Khatibeh, Alroubi, Khatour & Al-Delaimy, 2020; Choukas-Bradley, Ness, Fulmer & Galla, 2020; Ohannessian & Vannucci, 2020). It was found in the study that social media could be beneficial and this was similar to a previous study (Kroski et al, 2020). However, as one participant put it, social media can be beneficial or harmful depending on how adolescents use them. This finding confirms UNICEF's concerns about equipping adolescents to maximize the opportunities social media brings, while successfully avoiding the negativities it comes with (UNICEF, 2020).

Some benefits obtained by participants through social media use included initiating and maintaining friendships before, during and after COVID-19; e-commerce, access to information, exchanging creative content and schooling. These benefits were similar to those mentioned in previous studies (Akram & Kumar, 2017; Faizi, El Aifa & Chibeh, 2013; Longobardi, Settanni, Abris & Marengo, 2020; Mhlango & Molei, 2020; Van Cleemput, 2010).

From this study, it was indicated that friends made over social media were unable to play the roles of real friends. This was consistent with study findings that suggest that online friends are usually

less quality than offline friends in that, friends made on social media were obtained by a click a button and one could have a myriad of contacts who may not even know one's full name to ask about other relevant details to establish a meaningful alliance (Baste, Wood & Pratt, 2009; Cox, 2013; Zilka 2016).

Even the abundance of social media content, one is likely to be overwhelmed by social media and it makes it difficult to control one's time. The findings from the study suggested that time management and self-control were crucial if one was going to use social media. Previous studies suggested similar concepts (Malita, 2011; Moneleasa, 2017). Participants reasoned out that users of social media needed to show appropriate conduct and courtesy while being true to themselves and not follow trends blindly. A study done by (Mahadi, Jamahudin, Johari & Fuad, 2016) also indicated the importance of displaying good manners on social media.

Respondents had reported seeing advertisements on substances especially alcohol and were not in support of the content of such advertisements. They perceived these advertisements as bad and capable of tempting social media users who were adolescents into their use (Jackson, Janssen & Abma, 2018; Nicholls, 2012). These findings are also consistent with the aspects of the conceptual framework in Figure 1.5 that highlight the relationships between social media use and substance use. A significant number of respondents had reported having friends or members on social media who engage in substance use. They however expressed disfavor for those who used substances for medical reasons. Participants did not feel drawn to such practice despite their admiration or connections with such individuals.

#### **Applications:**

Social media on its own is a tool which can be manipulated for positive or negative impact by adolescents.

Discretion is vital when adolescents explore online environments in order to gain beneficial advantage of such platforms.

### **5.3. Understanding and Experience of Substance Use and Mental Health**

Respondents who used substances (alcohol), were males who were mostly initiated by their friends into substance use. This finding was consistent with studies which showed that males were more likely to engage in substance use than their female counterparts (Nkyi, 2014; Pavarin & Consolini, 2011). Contradictory findings however suggested that females were more likely to use substances than males (Assate, Meyer-Weitz & Petersen, 2014).

Even though some of these respondents had parents who consumed alcohol, it was not until some participants' friends "forced" them that they started alcohol use. This confirmed a study which advocated the roles of peers and peer pressure when it came to various decisions including whether or not to use substances (Chan & Chan, 2013; Jamison & Myers, 2008; Ramirez, Hinman, Sterling, Weisser & Campbell, 2012). A meta-analysis also revealed that influence from peers were greater than that of parents when it came to adolescents' substance use. The study stated that despite the fact that parents had some influence over the decisions made by adolescents such as their choice of substance use, one was more likely to be drawn towards substance use or not, based on their associations with friends (Allen, Donohue, Griffin, Ryan & Turner, 2003).

rather participant began alcohol use out of sheer curiosity. It has been documented that curiosity on the part of individuals especially adolescents can be a risk factor towards their use of substances. Such adolescents may have probably seen adults or other individuals consume such substances and out of utter curiosity also began to engage in their use (Al-Kandari, Yacoub Ota, 2001; AlMarri & Ovi, 2009; Nayi, 2014; Pawar & Consonni, 2013).

It was found in the current study that substances especially alcohol can be very easy to access by adolescents in Ghana. This was because of the lack of enforcement of policies that seek to prevent adolescents from having access to substances. Whilst this was problematic, other studies suggested that, in certain parts of Africa including Ghana, adolescents could have easy access to alcohol because they were cheap to purchase, there was lack of regulation or they were simply prepared in the households of these adolescents locally, than their unrestricted access to them (Kabira, Begay, Crichton & Eash, 2010; Kabore et al, 2019; Letsela, Weiner, Gafos & Fritz, 2019; Tanya, Tessera, Myers & Flinker, 2012).

Participants in the study perceived that substance use was harmful to the health and overall quality of life of its users. This was consistent with the conceptual framework of this study (Figure 1.5) as well as the relationship between substance use and mental health was concerned. It was also consistent with previous studies on the short and long term effects of substance use among their users (Nachinash, 2018; Rehan, 2011; Saha & Saha, 2012). Although they did not know the specific reasons why, participants stated that substances were harmful when ingested by pregnant women, lactating mothers and children. The effects of alcohol on lactating mothers has been researched for a significant period of time dating into the past. A previous study mentioned the findings that suggested that substances such as alcohol boosted breast milk quantity and quality to the benefit of infants. This same study however shed more light on the harmful effects of alcohol

consumption to both mother and child (Mennella, 2001). Studies done by other researchers also confirm the dangers associated with substance use during pregnancy, lactation and even among infants who consumed breastmilk with traces of substances (Haastrup, Pottegård & Danker, 2014; Napierala, Marela, Merrin & Flarek, 2016; Sebastiani et al, 2018).

In contrast to these however, another study found that when breast-feeding mothers were prescribed doses of tramadol by their health care providers, there were no observable adverse effects on their children. The study however indicated that the use of tramadol during breastfeeding should not be encouraged (Drugs and Lactation Database, 2020).

#### implications:

1. The desire to be accepted by friends was the main reason for participants' engagement with substances despite their knowledge of harmful effects of substances.
2. Adolescents in Ghana have unrestricted access to substances especially alcohol despite the policies that exist to curb their access to substances. This finding contributes to new knowledge on the topic.

#### **5.4. The roles of social media use and socio-demographic factors in the mental health status of adolescents.**

The conceptual framework of the study (Figure 1.5), indicated relationships between socio-demographic factors, social media use and mental health. This was confirmed by the findings from this study. In this study, adolescents who partook in the study, whether they were low, moderate or high social media users, revealed that social media had the potential of affecting their mood in variable ways. Through feelings of sadness, negative pressure and happiness, these

adolescents' mood were dependent on what content they came into contact with on social media. They became sad when they came into contact with information such as death, some felt negative pressure from unfair comparisons with other social media users and yet still, other adolescents used social media to release stress when they were down spirited. A recent study suggested however, that social media could adversely affect the emotional state of adolescents whether through content they viewed which were mostly picture perfect, or simply through unhealthy extended periods of social media exposure (Boer et al, 2020). Other studies emphasized that, unwarranted appraisal of oneself as compared to another, especially among ladies was one major cause of negative pressure and unhealthy mood (Faridouly, Dindrichs, Vartanian & Halliwell, 2015; Faridouly & Holland, 2018). Furthermore, connecting with people and networks that encourage positive feelings, feedbacks and contacts while on social media were able to encourage feelings of positive self-esteem and happy countenance (Weinstein, 2018).

It was found in the current study that although both males and females self-reported generally good mental health, the females self-reported some representations of anxiety from social media use. This was mostly from trends they tried to keep up with. This was not substantial towards impaired mental health since respondents indicated coping mechanisms such as gratitude which helped them to maintain a happy and peaceful composure. Some participants also emphasized the fact that outcomes from social media use were dependent on the individual user and their decision making ideals. Previous studies suggest that social media use does not necessarily affect the mental health of users whether males or females. Even though there could be incidences of mental health issues among social media users, these were not purely from the use of social media but could be from other sources (Heffer, Good, Daly, MacDonell & Willoughby, 2019; Kraski et al, 2020)

participants specified the benefits of balance and perspective when using social media. This was not likely a way to ensure their emotional stability when they came into contact with online content that conveyed envy or criticism, which could lead to negative emotions such as anxiety and depression. Weinstein in a previous study highlighted the concept of social media being a form of roller coaster which presented with both positive and negative sides to every user. It was stated in the study that the ability to effectively maintain a form of equilibrium was crucial to well-being (Weinstein, 2018).

Age did not play a role in the mental health of participants. Both females and males in the study said they had changed moods every now and then, however, none of the participants had considered suicide for whatever reasons. Previous studies on the contrary suggest that females had a tendency of experiencing depressive symptoms (Hjiberg, Strandh & Haggquist, 2020; Kamis & Copeland, 2020).

Religion played a key role in the self-reported good mental health of participants. Adolescents who were religious were discouraged from having suicidal thoughts and had a form of hope which helped them through difficulties, knowing that their God will come through for them. Previous studies highlighted the role of religion and religiosity on happiness and overall positive mental health outcomes. It was indicated that religion helped to provide various forms of social support and improved emotional states in individuals. Religion was also found as a protective shield from thoughts that could cause individuals to harm themselves (Abdel-Khalek, 2014; Agharia & Natar, 2018; Hall, Armistead & Austin, 2003).

Respondents who had both parents alive and lived with those parents were generally able to face challenges with the help of their parents. Participants whose parent(s) had died reported occasional feelings of loneliness, they were however able to face challenges that came their way by consulting

with their grandparents who acted as guardians. Previous studies emphasize the importance of parents and /or grandparents in helping to provide social support which enhances the psychological well-being of adolescents (Proff & Wild, 2017; Rasalingam, Clench-Aas & Rasmussen, 2017).

#### **implications:**

1. Social media could adversely or positively affect the mood of adolescents, depending on what they viewed.
1. Parents played a key role in the overall well-being of adolescents.

#### **5.5. Limitations of the Study**

Some limitations that are worth noting however include the possibility of reporting bias on the part of participants. To be specific, the likelihood of respondents under reporting substance use and poor mental health experiences either because they wanted to 'look good' in the eyes of the researcher or due to the inability to recollect such episodes could have some effects on the findings in the study, as such, individuals who refer to this study must be aware of this possibility.

Adolescents who partook in the study came from various socio-economic classes. As such, their social media use could have been affected by their inability to constantly afford internet connection. This possibility could have prevented some participants from reaching their intended use of social media which could have potentially led to different outcomes in the study.

## CHAPTER 6

### 6. SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 6.1. Introduction

The research objectives were to explore the perception of adolescents in the La Nkwantang Madina Municipality, about social media use and substance use, to discover how adolescents understand and experience substance use and mental health and to investigate how their mental health is influenced by social media use and socio-demographic factors. This chapter presents on the summary of the findings from the study, recommendations for future research and implications for policy and interventions.

#### 6.2. Summary

Adolescents all over the world have been and are being socialized into the world of social media. As interesting as it may seem, the gains from social media coupled with the drawbacks it presents makes social media a mine of opportunities and setbacks.

Given the surge in mental health issues among individuals transitioning from childhood into adulthood, a lot of concerns have been raised pertaining to how perceived risk factors such as social media use, socio-demographic factors and substance use affects the mental health of adolescents.

In the La Nkwantang Madina Municipality, out of every 10 adolescents, at least 8 possess a mobile phone and the study conducted revealed that adolescents in the municipality had good control over the content in their social media environment regardless of whether they were high or low social media users. Those participants who had ever engaged in substance use acknowledged

the harmful nature of substances and advised against it. Factors such as peer pressure and curiosity led to their use of substances and not necessarily parental use of substances.

Advertisements seen on social media concerning substances were seen as unwarranted in the circles of adolescents as they could tempt adolescents into their use.

Overall, participants had good mental health and it was found that sociodemographic factors such as religion and presence of parents boosted such outcomes.

### 6.3. Conclusion

Social media is a platform for communication, exchange and acquisition of information, online merchandise and maintaining friendships and studying before, during and after the COVID-19 pandemic. Adolescents who used social media were also familiar with possible negative effects associated with its use. Adolescents saw mental health as the ability to deal with routine activities and they also acknowledged the fact that social media could influence their use of substances.

Despite being aware of the negative effects of substances, adolescents still engaged in their use mostly through peer pressure. This indicates that knowledge of harmful effects of substances is not enough to deter adolescents from engaging in their use.

#### 6.4. Recommendations

Parents and Religious leaders must recognize their role in the mental state of adolescents and be available to direct them through challenging times.

NGOs in the La Nkwantang Madina Municipality should engage adolescents in programs that help adolescents to build their skills in effective time management and discussion on social media platforms.

The Ministry of Health (MOH) and Food and Drugs Authority (FDA) of Ghana should reassess and modify policies towards their successful implementations and outcomes. For instance, the use of valid identification cards when purchasing substances and the increase in cost of substances, so that adolescents would find it more difficult to access them.

Future studies can be conducted on ways in which substance advertisements can be displayed without enticing adolescents into its use.

Future studies could also consider assessing the mental health of adolescents with standardized tools while comparing their mental health state with their use of social media platforms.

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**APPENDIX 1: PARTICIPANT INFORMATION SHEET**

**RESEARCH INVESTIGATOR: SHARREN MARGARET OBIRI-YEDDAH**

**NAME OF INSTITUTION: SCHOOL OF PUBLIC HEALTH, COLLEGE OF HEALTH SCIENCES, UNIVERSITY OF GHANA LEGON**

**PROJECT TITLE: SOCIAL MEDIA, SUBSTANCE USE AND MENTAL HEALTH AMONG ADOLESCENTS IN THE LA NKWANTANANG MADINA MUNICIPALITY.**

Dear Participant,

Please take some time to read through the information below. If at any point you have any questions, please feel at ease to contact the researcher.

You have been invited to participate in a research study which seeks to explore the relationships between social media, substance use and mental health among adolescents in the La Nkwantanang Madina Municipality. You are invited to join in the study because you are an adolescent who has been using social media for more than 3 months and reside in the La Nkwantanang Madina Municipal Area. Before you decide to take part in the research, please take time to read the following information.

The study seeks to identify relationships between the use of social media platforms, substances and mental health status of adolescents in the La Nkwantanang Madina Municipality. You will have to partake in an interview where your age, religion, sex, educational background and parental educational background among other sociodemographic information will be sought. Questions will also be asked to assess the use of social media and substances as well as your mental health status. The interview should take approximately thirty minutes to complete. Please note that

responses given are strictly confidential as audio tapes will be kept under lock and key and used solely for the purpose of this research. No identifying information will be sought from you and as such, you would have to suggest a pseudonym by which you would be referred to in the interview. All responses given will be strictly confidential and will not be used against you. You are not obliged to be a part of the study and you are free to withdraw at any time without any consequences whatsoever. After the interview, you would be given an A5 notebook and a pen as a token of appreciation for partaking in the study.

The results of the study will be beneficial in equipping the necessary stakeholders with a thorough understanding of how to minimize the risk factors associated with social media and substances towards a better mental health and well-being of adolescents. Findings from the study will be published and used for teaching purposes without reference to any individual since there will be no information to identify persons who partake in the study. There are no risks in undertaking the study, however, in the case of any discomfort, kindly feel free to withdraw from the study.

For further information or enquiries at any stage of the research process, kindly contact me on 0244129799 or [sharredad@gmail.com](mailto:sharredad@gmail.com).

If you have any concerns about the study, kindly contact the administrator for the Ghana Health Service Ethics Review Committee, Nana Abena Kwaa Amah Apata, on 0503539896 and email at [ethics.research@ghsnaid.org](mailto:ethics.research@ghsnaid.org)

Thank You.

**APPENDIX 2: PARENT/GUARDIAN INFORMATION SHEET**

**RESEARCH INVESTIGATOR: SHARREN MARGARET OBIRI-YEBOAH**

**NAME OF INSTITUTION: SCHOOL OF PUBLIC HEALTH, COLLEGE OF HEALTH SCIENCES, UNIVERSITY OF GHANA LEGON**

**PROJECT TITLE: SOCIAL MEDIA, SUBSTANCE USE AND MENTAL HEALTH AMONG ADOLESCENTS IN THE LA NKWANTANANG MADINA MUNICIPALITY.**

Dear Parent/Guardian,

My name is Sharren Margaret Obiri-Yeboah, a Master of Public Health student at the School of Public Health, University of Ghana.

This research is being carried out on: *Social Media, Substance Use and Mental Health Among Adolescents in the La Nkwantanang Madina Municipality*. This is in partial fulfillment of my Master's Program.

As part of this study, socio-demographic information such as the age, religion, sex, presence or absence of parents and parental educational background of your ward will be kindly requested.

Also, information on your ward's use of social media applications and ways in which they benefit from the applications will be sought in addition to possible influence by peers on social media platforms. Further data will be collected on their knowledge, perception and indulgence in the use of substances. They will also answer questions which seeks to explore their mental health status.

The study will take 30 minutes to complete. The study involves no harm to participants, however, adolescents who experience any form of discomfort would be free to opt out of the study at any stage that they might have reached. The results of the study will be beneficial in equipping the necessary stakeholders with a thorough understanding of how to minimize the risk factors associated with social media and substances towards a better mental health and well-being of

adolescents. Findings from the study will be published and used for teaching purposes without reference to any individual since there will be no information to identify persons who fill out a questionnaire.

You are assured that all information given by your ward is strictly confidential as audio tapes will be kept under lock and key and used solely for the purpose of this research. All participants of the study will be given false names for the purpose of anonymity in the interviews. Information given would not be held against participants in any way.

Please be assured that the COVID-19 safety protocols of social distancing, the use of facemasks and washing of hands or hand-sanitizing with alcohol based hand sanitizers would be observed before, during and after the interviews accordingly by both the participant and researcher.

Participation in this survey is completely voluntary and participants are free to withdraw their participation without giving any reason for doing so.

Should you wish to contact me at any stage regarding consent you can contact me at 0544129799 or Email [sharredadi@gmail.com](mailto:sharredadi@gmail.com). If you have any concerns regarding this study, please contact Nana Abena Kwaa Anah Apana, the administrator, Ghana Health Service Ethics Review Committee on 0503539896 and email at [ethics.research@ghmail.org](mailto:ethics.research@ghmail.org)

Thank you.

Principal Investigator

Sharon Margaret Obiri-Yeboah

**APPENDIX 3: INFORMED CONSENT FORM- PARENTS/GUARDIANS**

**RESEARCH INVESTIGATOR: SHARREN MARGARET OBIRI-YEDDAH**

**NAME OF INSTITUTION: SCHOOL OF PUBLIC HEALTH; COLLEGE OF HEALTH SCIENCES UNIVERSITY OF GHANA LEGON.**

**PROJECT TITLE: SOCIAL MEDIA, SUBSTANCE USE AND MENTAL HEALTH AMONG ADOLESCENTS IN THE LA NKWANTANANG MUNICIPAL ASSEMBLY.**

My ward has been invited to take part in this study for the research titled above. Their role is to partake of the research interview on their own. I acknowledged that the research procedures have been explained to me and all questions have been answered to my satisfaction.

I have been informed that the confidentiality of the information provided will be safeguarded and that the privacy and anonymity will be ensured in the collection, storage and publications of the research material.

I ..... have fully understood the aims, methods and collections of participants in this study, I therefore consent to my ward's participation.

Parent/Guardian's signature

Date

**INVESTIGATOR STATEMENT AND SIGNATURE**

I certify that the parent/guardian has been given ample time to read and learn about the study. All questions and clarifications raised by the parent/guardian have been addressed.

Researcher's name..... Signature ..... Date.....

**APPENDIX 4: ASSENT FORM**

Study title: **SOCIAL MEDIA, SUBSTANCE USE AND MENTAL HEALTH AMONG ADOLESCENTS IN THE LA NKWANTANANG MADINA MUNICIPALITY.**

**PARTICIPANTS' STATEMENT**

I acknowledge that I have read or have had the purpose and contents of the Participants' Information Sheet read and satisfactorily explained to me in a language I understand

( English ( ) Twi ( ) Ga ( ) Other, please specify .....

( ) Other, please specify .....

I fully understood the contents and any potential implications as well as my right to change my mind (i.e. withdraw from the research) even after I have signed this form.

I voluntarily agree to be part of this research.

Participant's Signature .....

Participant Pseudonym..... Gender..... Age.....

Date:.....

**INTERPRETERS' STATEMENT**

I interpreted the purpose and contents of the Participants' Information Sheet to the afore named participant to the best of my ability in the English ( ) Twi ( ) Ga ( ) Other; please specify..... language to his proper understanding.

All questions and appropriate clarifications sought by the participant were also duly answered and interpreted to his/her satisfaction.

Signature of Interpreter..... Date:.....

Contact Details:.....

STATEMENT OF WITNESS

I was present when the purpose and contents of the Participant Information Sheet was read and explained satisfactorily to the participant in the language, he/she understood English ( ) Twi ( )

Ga ( ) Other, please specify.....

I confirm that he/she was given the opportunity to ask questions/seek clarifications and same were duly answered to his/her satisfaction before voluntarily agreeing to be part of the research.

Name: .....

Signature.....

Date: .....

INVESTIGATOR STATEMENT AND SIGNATURE

I certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participant have been addressed.

Researcher's name.....

Signature .....

Date.....

**APPENDIX 5: CONSENT FORM FOR STUDY PARTICIPANTS**

**Study title: SOCIAL MEDIA, SUBSTANCE USE AND MENTAL HEALTH AMONG ADOLESCENTS IN THE LA NKWANTANANG MADINA MUNICIPALITY.**

**PARTICIPANTS' STATEMENT**

I acknowledge that I have read or have had the purpose and contents of the Participants' Information Sheet read and satisfactorily explained to me in a language I understand (English  Twi  Ga  Other please specify.....) I fully understand the contents and any potential implications as well as my right to change my mind (i.e. withdraw from the research) even after I have signed this form.

I voluntarily agree to be part of this research.

Participant's Signature ..... Participant's Pseudo name .....

Gender..... Age..... Date.....

**INTERPRETERS' STATEMENT**

I interpreted the purpose and contents of the Participants' Information Sheet to the afore named participant to the best of my ability in the English  Twi  Ga  Other please specify..... language to his proper understanding.

All questions and appropriate clarifications sought by the participant were also duly answered and interpreted to his/her satisfaction.

Signature of Interpreter..... Date..... Contact details.....

**STATEMENT OF WITNESS**

I was present when the purpose and contents of the Participant Information Sheet was read and explained satisfactorily to the participant in the language, he/she understood (English , Twi   
Ga  Other please specify.....)

I confirm that he/she was given the opportunity to ask questions/seek clarifications and same were duly answered to his/her satisfaction before voluntarily agreeing to be part of the research.

Name: ..... Signature..... Date: .....

**INVESTIGATOR STATEMENT AND SIGNATURE**

I certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participant have been addressed.

Researcher's name..... Signature..... Date.....

## APPENDIX 6: IN-DEPTH INTERVIEW GUIDE

### Adolescent Sociodemographic Characteristics

1. Are you a student?
2. What religion do you belong to?

### Adolescent Parent/ Guardian Characteristics

3. Are your parents alive?
4. At home, who do you live with?
5. What is your parent/guardian's level of education?
6. Does any of your parents/guardians use alcohol, tobacco or tramadol?

### Adolescent's Social Media Use

7. Which social media platforms are you on?
8. On average, how many hours do you spend on social media daily?
9. Has social media been beneficial?
10. Are you able to control yourself when it comes to social media use?

### Adolescent substance use

11. How do you understand the term 'alcohol', 'tramadol' and 'tobacco'?
12. Have you ever consumed alcohol, tramadol or tobacco before?
13. (If Yes) Why did you consume any of them?
14. (If Yes) How do you consume them?
15. (If Yes) How difficult would it be to get access to any of them if you wanted to get it?

**Adolescent social media and substance use**

16. Do you see advertisements or displays on either alcohol, tobacco or tramadol on social media platforms?
17. (If Yes) How do you feel about such displays?
18. Do you know any friend or mentor on social media who drinks alcohol, uses tobacco or tramadol?

**Adolescent's Mental Health**

19. Would you consider yourself a self-confident person? Why?
20. Are you a happy person? Why?
21. Do you generally think of yourself as worthless? Why?
22. Do you think you are generally able to face the challenges that come your way? Why?
23. Do you see yourself as an asset in your groups? Why?
24. Have you ever had plans about killing yourself? (If yes, when and why?)

If yes:

- a) How did you control and deal with such thoughts?
- b) Did you talk to anybody about such thoughts?
- c) How close have you come to killing yourself?
- d) Do these thoughts of killing yourself torment you?
- e) How do these thoughts interfere with your daily activities?

Thank you for the time and cooperation in partaking of this interview.

**GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE**

In case of any of the member and date of the letter should be quoted



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My Ref: GHS/ETH/RES/2020/07/004  
Your Ref: /

30th July, 2020

Ms. Margaret Osei-Yeboah  
School of Public Health,  
University of Ghana  
Laguna-Accra

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	1-115-ERC-82546/20
Study Title	Social Media, Substance Use and Mental Health among Adolescents in the Korlegye-Klottey Municipal Assembly
Approval Date	16 <sup>th</sup> July, 2020
Expiry Date	29 <sup>th</sup> July, 2021
GHS-ERC Decision	Approved

This approval requires the following from the Principal Investigator

- Submission of yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval of the study later for more than 12 months.
- Reporting of all serious adverse events related to the study to the ERC, within three days verbally and seven days in writing.
- Submission of a final report after completion of the study.
- Informing ERC if study cannot be implemented or is discontinued and reasons why.
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

You are kindly advised to adhere to the national guidelines or protocols on the prevention of COVID-19

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol.

SIGNED:

Dr. James Nkansah  
(Head, Ethics & Research Management Department)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra

**GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE**

Process of applying for  
research involving human  
subjects should be approved



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<http://ghs.gov.gh/ethics-review/ghs-erc/>  
Form No. 01

07 October 2020

Sharon Margaret Obasi-Yeboah  
School of Public Health  
College of Health Sciences  
University of Ghana  
Lagoo

**RE: Request for Ethical Approval to Amend Protocol**

Reference is made to your letter dated 2<sup>nd</sup> September 2020 received on 11<sup>th</sup> September 2020 on the above subject matter.

The Ghana Health Service Ethics Review Committee (GHS-ERC) has reviewed the documents submitted, and the rationale for the request for amendment. The GHS-ERC has given approval for the amendments to be implemented.

GHS-ERC Number	GHS/ERC/2019/028
Study Title	Social Media, Substance Use and Mental Health among Adolescents in the La Nkwantang Madina Municipal Assembly
Effective Date for Approval of Amendment	07 October 2020
Expiry Date	07 <sup>th</sup> July 2021
GHS-ERC Decision	Amendment version 2 dated 30th August, 2020

The approval covers the following only:

1. Change of study title from "social media, substance use and Mental Health among adolescents in the Koforidua Municipal Assembly" to "Social Media, Substance Use and Mental Health among adolescents in the La Nkwantang Madina Municipal Assembly"
2. The study design has been changed from "quantitative study" to "qualitative study"
3. Changes have been made to consent forms, assent forms and participant information sheets.

4. The study population has been changed from "Adolescents in Senior High Schools in the Kwekye-Kwesey Municipal Assembly" to "Adolescents in households in the La Nkwanta-Nkwanta Municipal Assembly".

5. Study site has been changed from "Senior High Schools in the Kwekye-Kwesey Municipal Assembly" to "Households in the La Nkwanta-Nkwanta Municipal Assembly".

6. The sample size has been changed from "500" to "when the study reaches saturation".

7. The data collection tools have been changed from "questionnaires" to "an in-depth interview guide".

The following applies:

- Submission of yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months.
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study.
- Informing ERC if study is discontinued and reasons why.
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

You are kindly advised to adhere to the national guidelines or protocols on the prevention of COVID-19.

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol.

SIGNED: \_\_\_\_\_

  
Dr. James Akwasi

(Head, Ethics & Research Management Department)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra