THE ROLE OF MOBILE MEDIA IN ADOLESCENT GIRLS' ACCESS TO SEXUAL REPRODUCTIVE HEALTH AND RIGHTS INFORMATION DURING Covid-19 PANDEMIC: A CASE STUDY OF 4 SELECTED SECONDARY SCHOOLS IN LUSAKA, ZAMBIA

RINGFORD ABEL MWELWA
(221115956)

Supervisor: Professor Sarah Gibson

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DECLARATION

COLLEGE OF HUMANITIES

DECLARATION - PLAGIARISM

I, Ringford Abel Mwelwa, declare that:

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Signature: 

Date: 27/06/2024

Place: Lusaka

Supervisor: Prof Sarah Gibson

Signature: 

Date: 31/01/25

Place: Durban

DEDICATION

To my deceased parents: Margaret Banda and Adam Mwelwa, for your inspiration in sowing the seed in me for the ever-green passion for reading. Mum and Dad, you came from the village with little formal education but always pushed me to reach my greatest potential in education. From the yonder, clasped in God's bosom, smile and rejoice for your boy refused to let you down. Celebrating from your heavenly abode for this PhD is thanks-be-to-you. *Ndaluumba abumbi* (thank you very much).

To my late young brother, Field Jacob Mwelwa. At the passing of mum and dad, you literally became mum and dad wrapped up in one, sacrificing for us by selling at a makeshift shop (*kantemba*) and working as a Babar man. You put your life on hold so that we could go to school. You did not live to enjoy the fruits of your unquantifiable sacrifices. Rest at ease for your sacrifices were not in vain. I owe you a debt that I will never pay back both in this life and beyond it.

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Lastly, my deep gratitude to all the Catholic Parish communities in which I served as a Catholic priest and as student towards priestly ordination. It is through my encounters with you all that I started to gain serious interest in issues of adolescent sexual reproductive health. Every time, this subject was brought up, many people did not want to talk or have a conversation for fear of being looked at as "unholy" or because culture is prohibitive of such discussions. While such conversations were uncomfortable to have, many adolescents continued to get pregnant, and others contracted sexually transmitted infections including HIV. These experiences got me thinking about our Zambian cultural epistemologies on adolescent SRHR, and how as a people we could explore

alternative sources of information to help with the adolescent SRHR situation. It is thanks to those experiences with you that this PhD journey was born. To you all I say God bless you immensely.

ABSTRACT

The Covid-19 pandemic caused several challenges in the health sector, particularly in the area of adolescent sexual reproductive health and rights (SRHR) services including physical access to information. However, the challenge of adolescent girls' access to SRHR information in Zambia in the context of the Covid-19 pandemic is understudied (if at all). This study aimed at investigating the role of mobile media in adolescent girls' access SRHR information in four selected secondary schools in Lusaka Zambia. The Covid-19 pandemic worsened the already existing vulnerabilities of adolescents' access to SRHR information. This was caused by measures implemented to curb the spreading of Covid-19 such as lockdowns, restrictions on movements, prolonged closure of schools. Due to such measures, adolescents could no longer access SRHR information through face-to-face mobilizations such as workshops, drama, seminars, and classroom learning of comprehensive sexuality education. Additionally, the fear of contracting Covid-19 prevented women and young people from visiting health facilities for SRHR services. Community outreach services for SRHR also reduced during Covid-19. This thesis employed a qualitative approach that utilized FGDs for data collection. The study revealed that before Covid-19, adolescent girls had access to SRHR information through various sources, including Comprehensive Sexual Education (CSE) in schools, Peers, Youth-friendly corners at health facilities and clubs in schools and even their friends at home. However, Covid-19 affected access to SRHR information through school closures and lockdowns. The findings of this study indicate that adolescent girls in Zambia during Covid-19 were profoundly dependent on mobile media to access information SRHR given the restrictions on movements and prolonged school closures. The majority of participants reported using Google, Facebook, WhatsApp, and YouTube to search for SRHR information, and of these, Google was the most popular mobile media source. Additionally, the findings indicate that while many participants relied on mobile media for SRHR information, they had concerns about issues such as: accuracy of information, privacy, reliability, exposure to pornographic content, and risk of online abuse. The study underscores the potential of integrating mobile media with traditional methods to address SRHR information gaps among adolescent girls, particularly during crises. In addition, the findings reveal that mobile media has the potential to empower adolescent girls with SRHR knowledge, but there are also challenges and limitations to be addressed to ensure the safety of the adolescent girls as well as the quality and accuracy of information accessed. Furthermore, the study findings demonstrate the need to design SRHR

information access' interventions that consider the digital divide and unequal access to technology. Additionally, there is need for infrastructure development to enhance internet speed, reduce internet costs, expand network provision to include all areas in Zambia, and to stabilise electricity services. By and large, the study places emphasis on the need for a comprehensive approach to information access on SRHR that integrates both online and offline platforms to address the SRHR information needs of adolescent girls in Zambia.

Key words: Adolescents, SHRH, Mobile Media, Zambia, Covid-19 pandemic, Self-Determination, Participatory Culture, Mobile Audiences

Table of Contents

LIST OF TABLES

LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Treatment
ASRHR	Adolescent Sexual Reproductive Health and Rights
AU	African Union
AUC	African Union Commission
CEDAW	Committee on the Elimination of Discrimination Against Women
CESCR	Committee on Economic, Social and Cultural Rights
CET	Cognitive Evaluation Theory
CSO	Central Statistics Office
CRC	Commission for the Rights of Children
Covid-19	Coronavirus Disease of 2019
CSE	Comprehensive Sexuality Education
CSRHE	Comprehensive Sexual Reproductive Health Education
DEBS	District Education Board Secretary
DSD	Differentiated Service Delivery
EVD	Ebola Virus Disease
FGD	Focus Group Discussion
FGM	Female Genital Mutilation
FP	Family Planning
mERA	mHealth Evidence Reporting and Assessment
MHM	Menstrual Health Management
HSSREC	Humanities and Social Sciences Research Ethics Committee

GBV	Gender Based Violence
HIC	High Income Countries
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population Development
ICT	Information Communication Technology
IPPF	International Planned Parenthood Federation
IPV	Intimate Partner Violence
LMICs	Low- and Middle-Income Countries
PDA	Personal Digital Assistant
RTA	Reflexive Thematic Analysis
SSA	Sub-Saharan Africa
SDGs	Sustainable Development Goals
SDT	Self-Determination Theory
SNS	Social Networking Sites
SRHR	Sexual Reproductive Health and Rights
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections
UKZN	University of KwaZulu-Natal
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Program
UNECA	United Nations Economic Commission for Africa
UNESCO	United Nations Education Scientific Cultural Organization

UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNZA	University of Zambia
UNZANET	University of Zambia Network
WHO	World Health Organization
ZANEC	Zambia National Educational Coalition
ZHD	Zambia Health Demographic Survey
ZICTA	Zambia Information Communication Technology Authority

CHAPTER ONE
INTRODUCTION AND BACKGROUND
1.0 Introduction

> In low- and middle-income countries [LMICs], almost 10% of girls become mothers by the age of 16, with the highest rates in Sub-Saharan Africa. A substantial proportion of sexually active adolescents are not aware of any source of contraception, health facilities providing sexually transmitted infection (STI) treatment or how to access psychosocial support (Macharia *et al.*, 2021:357)

The Covid-19 pandemic, declared a global health crisis by the World Health Organisation [WHO] in March 2020, exacerbated pre-existing vulnerabilities in adolescent girls' access to SRHR information. This study explores how mobile media bridged these gaps during the pandemic in four secondary schools in Lusaka, Zambia. The research examines the opportunities and challenges posed by mobile media platforms in delivering critical SRHR information to adolescent girls. This chapter provides the background, problem statement, objectives, research questions, and significance of the study. Before providing the background to the study, I will first provide the working definitions of major concepts applied in this study. More detailed definitions will be outlined and critically discussed in Chapter Two (Literature Review) of this thesis. The general definition provided below for the five major concepts explored in this study (1. Adolescence, 2. Sexual Reproductive Health and Rights [SHRH], 3. Adolescent Sexual Reproductive Health and Rights [ASRHR], 4. Mobile Media, and 5. Covid-19) are to help orientate the reader to the focus and assumptions of the thesis.

Adolescence: This is the period between 10-19 years of age, characterised by accelerated physical, cognitive, and psychological development (WHO, 2019), and marks the onset of puberty and sexual maturity.

SRHR: To define SRHR, it is necessary to start by defining sexual reproductive health (SRH), because sexual reproductive health rights hinge on SRH. By definition, SRH is a state of physical, emotional, mental, and social well-being regarding all facets of sexuality and reproduction whereby the person autonomously decides when and with whom to reproduce, not purely the

absence of disease, dysfunction, or frailty. (Endler*, et al.* 2020; UNFPA, 2021). Sexual rights belong to the category of human rights that pertain to the right of individuals to exercise autonomy over their bodies and make free and responsible decisions regarding their sexuality where such decisions are devoid of coercion, discrimination, and violence (Starrs *et al.*, 2018; Gruskin *et al.*, 2019).

ASRHR: Adolescent Sexual Reproductive Health and Rights "is the ability for adolescents to have access to comprehensive sexuality education, essential sexual and reproductive health services, and autonomous decision-making power to protect their health" (UNFPA, 2014).

Mobile Media: This is an internet enabled interactive platform that allows people to share personal and non-personal information (Wei, 2013). Mobile media are defined as 'a class of mobile devices including cell phones, smartphones, and tablets that integrate multimedia (typically a microphone and camera), an always-on network connection, and often, the running of mobile software or "apps"' (Schrock, 2015: 1234). The communicative affordances of mobile media include portability, availability, locatability and multimediality' (Schrock, 2015: 1235).

Covid-19: This refers to the coronavirus disease of 2019 which is "an illness caused by a novel coronavirus now called severe acute respiratory syndrome coronavirus 2" (Abebe et al., 2020). It was named as Coronavirus disease 2019 (Covid-19) by the WHO (Harapan, 2020). It belongs to the family of Coronaviruses as explained by Abebe *et al.* (2020):

> Coronaviruses are large family-RNA viruses that belong to the order *Nidovirales*, family *Coronaviridae*, subfamily *Coronavirinae*. The novel Covid-19 infection, caused by a beta coronavirus called *SARS-CoV-2*, is a new outbreak that has been emerged in Wuhan, China in December 2019.

Having presented working definitions of concepts that have been used in this thesis, I now move to the background of the study.

1.1 Background to the study

Adolescents in Zambia face numerous challenges in accessing SRHR information, including cultural taboos, limited resources, and systemic inequalities. The Covid-19 pandemic further disrupted access through school closures and restrictions on movement. Globally, mobile media

has emerged as a key tool for health communication, offering both potential and challenges. In Zambia, the digital divide remains a significant barrier, with disparities in internet access and device availability exacerbating inequities. This study explores the intersection of mobile media and SRHR in Zambia during the Covid-19 pandemic, contributing to the growing body of knowledge on digital health interventions in low- and middle-income countries [LMICs]. By focusing on the lived experiences of adolescent girls, the research provides insights into the role of mobile media in navigating SRHR challenges during the pandemic.

The Covid-19 pandemic had negative consequences on the global human population, leading to stretched health delivery systems that affected people's physical, emotional, psychological, and social wellbeing, and significantly affected adolescents (Meherali *et al.*, 2023). According to Nanda *et al.* (2020), prior to Covid-19, adolescents already faced barriers in openly accessing SRHR information and services due to social stigmatization and scrutiny, and restrictions about SRHR support and what SRHR support was to be available and accessible. Such SRHR challenges are likely to be exacerbated by the Covid-19 crisis especially for vulnerable groups like adolescents (Nanda *et al.*, 2020). Due to the Covid-19 public health measures, adolescents especially adolescent girls faced additional significant challenges in accessing SRHR information and services due to public health measures intended to prevent the spread of Covid-19, for example:

> The pandemic imposed additional barriers further reducing access to SRH services. Prioritization of resources for essential Covid-19 response over SRH services resulted in the closure of safe abortion sites, reduced supply of contraceptives, and suspension of SRH services. As a result, this is expected to increase cases of gender-based violence (GBV), unplanned pregnancies, unsafe abortions, and maternal mortalities. The closure of schools and SRH clinics limited opportunities for adolescents to gain comprehensive SRH education and utilize SRH services or products (Meherali *et al.*, 2023:1).

Given the reality of the pre-Covid-19 adolescent SRHR challenges, and the worsening of this situation during the Covid-19, the need for SRHR information and services to protect and promote girls' and young women's reproductive health and rights is more vital than ever (Plan international, 2020). This study therefore seeks to explore how mobile media has been engaged as an alternative

source for adolescent girls to access SRHR information during the Covid-19 pandemic in Lusaka, Zambia, in the face of public health restrictions on movements and the prolonged school closures.

There are two interrelated sides to this research: mobile media and adolescent girls and their access SRHR information during Covid-19. What prompted or motivated me to this research arose out of my first career as a priest in the Catholic Church. There, I quickly learned how African girls in general, and Zambian girls in particular, face considerable challenges to their sexual and reproductive health and rights, and the accessibility of accurate information about reproductive health. The challenges I observed, many of which were also established in the scholarly literature (see Chapter Two) include: sexual coercion and bullying; lack of education, information and mentors to help them navigate these challenges; high rates of early and unwanted pregnancy; lack of access to sexual and reproductive health and rights, lack of access to reproductive health services, especially for contraception; gender inequalities and harmful traditional practices, such as female genital mutilation (FGM) and child or early and forced marriage; and risk and prevalence of STIs, including HIV/AIDS.

Other challenges include prejudices from health professionals towards adolescents seeking contraceptives from health facilities; and the lack of information and knowledge about youth friendly centres; the procuring of unsafe abortions by either themselves as adolescent girls or aided by unprofessional women in the community. There could be a co-relationship between these factors and the disproportionate female vulnerability to HIV/AIDS (Young *et al.*, 2019). In Zambia, 5% of adolescent girls (15-19 years), and 11% of young women (20-24 years) are living with HIV, compared to about 4% of boys, and 7% of young men in the same age categories (Edwards *et al.*, 2021). Added to the growing SRHR challenges for girls is the reality of teenage pregnancy, for example within 6 months (from January to June 2022), Chipata district of Zambia's Eastern province recorded 500 teenage pregnancies (*Lusaka Times,* September 24, 2022). This number is high when compared to 188 teenage pregnancies in Chipata district during a period of 9 months from January to September of 2020 (*Lusaka Times*, October 21, 2020). In response to the situation of high numbers in teenage pregnancies, interventions were put in place by district health officials, such as several SRHR adolescent friendly activities provide information and products to adolescents (*Lusaka Times*, September 24, 2022). Adolescents were provided with condoms, and different types of contraceptives (*Lusaka Times*, September 24, 2022).

Zambia is one of the many countries that continue to grapple with reproductive health problems because the right to appropriate conditions for reproductive health is challenged by a myriad of factors such as lack of accurate information and counsel; norms anchored on gender, religion and culture; and the adverse effects of poverty (Lahme and Stern, 2017). Following the 1994 affirmation of sexual reproductive health and rights as human rights by the International Conference on Population and Development (ICPD), the Zambian government committed to the fulfilment of SRHR for all its citizens through the ratification of several instruments of international law (Zambia Policy Brief, June 2017). Additionally, Zambia committed herself to achieving Sustainable Development Goals [SDGs], some of which are directly linked to SRHR, for example; goal #3 focuses on ensuring health lives and the promotion of well-being for all people of all ages; goal #4 ensures quality education for all; and goal #5 centres around the achievement of gender equality and empowerment of all women and girls (Zambia Policy Brief, June 2017).

Despite the commitment to the fulfilment of SRHR as human rights for all its citizens, and further commitment to the fulfilment of SDGs, among them, those linked to SRHR, Zambia is still one of the most affected countries by HIV/AIDS and continues to grapple with the challenges of preventing HIV infections. For example, 1.5 million people were reported to be living with the virus in 2020, while new cases stood at 51 000 (*Lusaka Times*, December 2, 2021), Lusaka province [the location for this current study] has the highest HIV prevalence rate in Zambia, standing at 15.1%, and this is higher than the national prevalence which is estimated at 11% (*Lusaka Times*, December 2, 2021). The distribution of HIV infections in Zambia is concentrated in urban areas, with Lusaka province accounting for the highest percentage at 16.1% of new infections, followed by Western province at 16%, and Copperbelt province at 14.2% (Mweemba *et al.* (2022). The pattern of HIV prevalence in urban areas is not unique to Zambia as this is also seen in countries like Malawi, Tanzania, Zimbabwe, Kenya, and South Africa (Mweemba *et al.*, 2022; Simoya *et al.*, 2023). Some of the factors attributed to the worrying spikes in HIV infections in Zambia include, but are not limited to, high risky behaviours, early sexual debut, poor adherence to treatment, tendency not to test for HIV, and alcohol and drug abuses (*News Diggers*, August 16, 2022). Other factors that are associated with HIV infections among young people in Zambia are related to individual-socioeconomic factors which include education, wealth and employment (Nakazwe *et al.*, 2022).

While the HIV pandemic affects both men and women, in Zambia the burden of this pandemic is borne more by women than men as women account for 60% of the total population of the people living with HIV (*News Diggers*, August 16, 2019). This pattern was like 2015 which showed that there were more women (15.1%) than men (11.1%) infected with HIV (Butts *et al.*, 2018). Zambia is one of the countries that have been most affected by HIV/AIDS over the years, and according to Katirayi *et al.* (2021), Zambia's HIV prevalence rate for the youth aged 15-24 years in 2019 stood at 5.6% for women and 1.8% for men. The situation of having more females prone to contracting HIV/AIDS is not unique to Zambia, for example, Ethiopia has its female adolescents seven times more prone to contract HIV/AIDS than their male counterparts (Wakjira and Habedi, 2022).

The situation of having more women infected with HIV than men in Zambia was different between 2002 and 2014 as advanced by Nakazwe *et al.* (2019:1) in their project that focused on "Contrasting HIV prevalence trends among young women and men in Zambia in the past 12 years: data from demographic and health surveys 2002–2014." The findings of this research showed that there was a shift in the HIV prevalence rate from women to men in both urban and rural areas. There was a higher HIV prevalence rate in young men than women observed over a period of 12 years, and this shift was because of differential effects in the efforts to prevent the spread of HIV.

Today, as has been argued by Butts *et al.* (2019), there are more women infected with HIV than men in Zambia. This position is supported by Simpson *et al.* (2021), who argued that in 2017, the statistics of young women infected with HIV stood at 5.7% compared to 2.5% for young men. Furthermore, Simpson *et al.* (2021) posited that adolescent girls are at high risk of contracting HIV and getting pregnant. This is attributed to some socio-economic factors: transactional sex used as payment for school fees when parents have no money, early marriages for girls as an escape route for parents from their financial obligations, commercial sex for girls to financially support their families (Butts *et al.*, 2019; Saasa and Mowbray 2019; *News Diggers* August, 16, 2022). Other factors are cultural rather than socioeconomic, for example, early sexual debut for girls occurring around the age of 14 in Sub-Saharan Africa predisposes girls to HIV infections (Butts *et al.*, 2019). Furthermore, Butts *et al.* (2019), postulated that early sexual debut has been associated with risky factors such as multiple sexual partners, unprotected sexual intercourse, having sexual intercourse while under the influence of either alcohol or drugs [or both alcohol and drugs]. Added to these

factors are the age disparity in sexual relationships, and the limitation in girls' power to make sexual decisions (Saasa and Mowbray, 2019).

Another contributing factor to the high HIV prevalence among women and girls is Gender-Based Violence (GBV), as it predisposes women and girls to HIV infections by preventing them from accessing SRHR services (Saasa and Mowbray, 2019, *News Diggers*, August 16, 2022). Child marriages are also a contributing factor as these predispose girls to higher risks of HIV infection than those who marry after attaining 18 years of age (Petroni *et al.*, 2019). In support of this position, Petroni *et al.* (2019: 694) posited that "early sexual onset, unsafe sex, frequency of sex, age-disparate relationships, low educational attainment, limited access to information and services, social isolation, and experience of intimate partner violence are all characteristically higher within child marriages, and have been shown to be associated with an increased incidence or prevalence of HIV among adolescent girls." While such claims have been made on the co-relationship between early/child marriages and high risk of HIV infection, there are some disputes to such claims as some studies have indicated that unmarried girls of the same age group as those who have married early tend to be at a higher risk of HIV infection (Petroni *et al.*, 2019).

Ironically, while it is true that the HIV pandemic affects more women than men in Zambia, it is argued that it is the menfolk who account for more HIV/AIDS related complications and deaths (Kerkhoff *et al.*, 2020; *News Diggers*, August 16, 2022). This is because of men's poor attitudes to health-seeking-behaviours. Overall, men tend to delay accessing HIV counselling and testing services and usually opt to test by proxy – via their partners – rather than doing it personally. Furthermore, they are less willing to commence treatment once they discovered to be HIV positive (Kerkhoff *et al.*, 2020, *News Diggers,* August 16, 2022).

In spite of the plethora of SRHR problems that young people continue to be faced with, this subject remains under-investigated (Akbarialiabad *et al.*, 2021). Additionally, in Sub-Saharan Africa, there is a dearth of studies on adolescent sexual reproductive health and rights issues in the context of pandemics (Ng'andu *et al.*, 2022). The need for studies of adolescent girls' SRHR issues in sub-Saharan Africa in the context of pandemics can be argued by placing the sexual reproductive health of women and girls in the realm of human rights as advanced by WHO (2007). The WHO places women's sexual and reproductive health as part of the many first-generation and second-generation human rights (WHO, 2007). These include the right to life, the right to be free from torture, the

right to health, the right to privacy, the right to education, and the prohibition of discrimination. The Committee on Economic, Social and Cultural Rights (CESCR) and the Committee on the Elimination of Discrimination against Women (CEDAW) have both indicated that women's right to health includes their sexual and reproductive health (United Nations Human Rights Office of the High Commissioner, 2024). This means that nation states, such as Zambia, have obligations to respect, protect and fulfil rights related to women's sexual and reproductive health at all times, including during health pandemics such as the Covid-19 pandemic. Unfortunately, for social, economic, cultural and political factors in Zambia, these rights are not recognised in the Constitution.

The United Nations Human Rights Office of the High Commissioner lists the following rights drawn from the relevant United Nations' instruments:

1. CEDAW [Committee on the Elimination of Discrimination against Women] (Article 16) guarantees women to decide "freely and responsibly on the number and spacing of their children and to have access to the information, education and means to enable them to exercise these rights."

2. CEDAW (Article 10) also specifies that women's right to education includes "access to specific educational information to help to ensure the health and well-being of families, including information and advice on family planning."

3. The Beijing Platform for Action [BPFA] states that "the human rights of women include their right to have control over and decide freely and responsibly on matters related to their sexuality, including sexual and reproductive health, free of coercion, discrimination and violence."

4. The CEDAW Committee's General Recommendation 24 recommends that States prioritise the "prevention of unwanted pregnancy through family planning and sex education."

5. The CESCR [Committee on Economic, Social and Cultural Rights] General Comment 14 has explained that the provision of maternal health services is comparable to a core obligation which cannot be derogated from under any circumstances, and the States have the immediate obligation to take deliberate,

concrete, and targeted steps towards fulfilling the right to health in the context of pregnancy and childbirth.

6. The CESCR General Comment 22 recommends States "to repeal or eliminate laws, policies and practices that criminalise, obstruct or undermine access by individuals or a particular group to sexual and reproductive health facilities, services, goods and information (United Nations Human Rights Office of the High Commissioner, 2024).

In the context of the Covid-19 pandemic, the fulfilment of Zambia's commitments to adolescent SRHR needs has become all the more challenging because health emergencies make it difficult to deal with or respond to the outcomes of sexual and reproductive related behaviours such as pregnancy and sexually transmitted infections at individual, community, and health system levels (Ahonsi, 2020). According to Plan International (2020), report on 'Living Under Lockdown", the prolonged closure of schools due to the Ebola crisis in West Africa, saw a sharp increase in teenage pregnancies, and an astonishing 75% in maternal mortality over a period of about 18 months. Before the Covid-19 crisis, adolescent girls and young women in Zambia were already facing significant challenges in accessing SRHR information and services (even despite the introduction of Comprehensive Sexuality Education [CSE] in schools, and the presence of youth friendly corners). The Zambian Government introduced CSE in 2014 in an effort to promote ASRHR by preventing early and unintended pregnancies, and early marriages (Chavula *et al*, 2023). UNESCO defines CSE as:

> the curriculum-based process of teaching and learning about the cognitive, emotional, physical, and social aspects of sexuality. It aims to equip children and young people with knowledge, skills, attitudes, and values that will empower them to: realize their health, wellbeing, and dignity; develop respectful social and sexual relationships; consider how their choices affect their wellbeing and that of others; and understand and ensure the protection of their rights throughout their lives (UNESCO, 2017:16-17).

Sexual reproductive health and rights issues, such as teenage pregnancies, child marriages and mobile media are cultural issues.

Regarding adolescent girls' access to SRHR information, mobile media has been a game-changer. It offers a private and convenient way for girls to access information on sensitive topics such as menstruation, contraception, and sexuality, which they might otherwise feel uncomfortable discussing with healthcare providers or family members (Chandra-Mouli *et al.*, 2019). Today, mobile media technologies provide the much needed SRHR information which many adolescents consider to be credible, trustworthy, and easily accessible (Macharia *et al*, 2021). Additionally, mobile media platforms are proving to be game-changers as "Mobile phone-based interventions in adolescent SRH in resource-limited settings are becoming more common as the user-friendliness of this technology has increased, and evidence shows that mobile phones are effective in delivering knowledge and realizing behaviour change" (Macharia et al, 2021).

Mobile media has been used in various ways to promote SRHR among adolescent girls, including:

1. Mobile Apps: Providing access to SRHR information, tracking menstrual cycles, and offering contraceptive advice (Mobile Alliance for Maternal Action, 2019).

2. SMS/Text messaging: Sending reminders for appointments, providing health tips, and offering support (SMS for Life, 2019).

3. Social Media: Sharing information, personal stories, and support through online communities and forums (Social Media for Sexual and Reproductive Health, 2020).

4. Online platforms: Offering comprehensive SRHR information, online counselling, and referral services (Girls' Globe, 2020).

The benefits of mobile media in increasing adolescent girls' access to SRHR information include: convenience and privacy (L'Engle *et al.*, 2018), increased accessibility and reach (Tamrat *et al.*., 2019), personalized and interactive content (De Wit *et al.*, 2019), reduced stigma and shame (Chandra-Mouli *et al.*, 2019), improved health outcomes (World Health Organization, 2018), and "organise information seminars in SRH, answer questions from group members to dispel myths about sexuality and pregnancy prevention" (Macharia *et al.*, 2021:357).

However, there are also challenges and limitations to consider, such as: limited access to mobile devices and internet connectivity (International Telecommunication Union, 2019), concerns about data privacy and security (World Health Organization, 2019), inaccurate or unreliable information

(Eysenbach *et al.*, 2019), and the potential for misinformation and harmful content (Livingstone *et al.*, 2019). Overall, mobile media has the potential to revolutionize the way adolescent girls' access SRHR information and services, but it is essential to address the challenges and ensure that mobile media interventions are evidence-based, culturally sensitive, and prioritize girls' privacy and safety (UNICEF, 2019).

It is against this backdrop that this study assesses adolescent girls' access to SRHR information through mobile media during the Covid-19 pandemic recognizing they were cut off through lockdown to accessing them physically in school and at facilities in youth friendly corners.

1.2 Covid-19 and Adolescent Girls' SRHR Needs in Zambia

Since 11 March 2020, the world has officially faced a health crisis, the Covid-19 pandemic (WHO, 2020a). The WHO (2020b) reports that the Coronavirus disease (Covid-19), previously known as the '2019 novel coronavirus', is a highly infectious respiratory global health threat (disease) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The clinical symptoms of Covid-19 include fever, cough, fatigue, myalgia (muscle pains), dyspnoea (difficulty in breathing), loss of taste and smell and diarrhoea (WHO, 2020b). The devastating impact of the pandemic, which emerged in December 2019 from the Chinese city of Wuhan, has been felt in almost every part of the globe. In Africa, the first Covid-19 case was recorded in Egypt on 14 February 2020. The WHO reports that there have been 624,235,272 confirmed Covid-19 cases globally, including 6,555,270 deaths as of 24 October 2022 (WHO, 2022a).

The Covid-19 pandemic arrived in Zambia in March 2020, with the first cases reported in Lusaka (Ministry of Health Zambia, 2020). The government quickly responded by shutting down educational institutions and restricting travel (Lungu, 2020). However, the virus spread rapidly, and by the end of March, 36 cases had been reported (WHO, 2020). As the pandemic spread uncontrollably, the government introduced stiffer measures among them lockdowns, social distancing, and mask mandates (Government of Zambia, 2020). Despite these efforts, the virus continued to spread, and by the end of June 2020, Zambia had reported 1,594 cases and 24 deaths (WHO, 2020). The pandemic stirred havoc on the country's healthcare system, economy, and society (Chanda, 2020). Hospital's capacities were outnumbered by illnesses caused by the pandemic, and healthcare workers had difficulties coping with the rising numbers of cases (Mwale,

2020). The lockdowns and restrictions led to prevalent job losses, and many families struggled to put food on the table let alone meeting other basic needs (*Zambia Daily Mail*, 2020).

As the pandemic seethed on, Zambia's cases and deaths continued to soar (WHO, 2021). In the country, the highest number of cases were reported in January 2021, with over 54,000 cases reported (Ministry of Health Zambia, 2021). The death toll also shot up, with over 3,600 deaths reported by the end of 2021 (WHO, 2021). Notwithstanding the challenges, Zambia's healthcare workers, government, and citizens worked around the clock to stop the pandemic (Sikaala, 2021). Vaccination campaigns were rolled out and public awareness moved into action to educate people about the virus and how to prevent its spread (WHO, 2021). By the end of 2022, there were over 334,000 cases and 4,024 deaths in Zambia (WHO, 2022). While the pandemic was still ongoing, the number of cases and deaths had significantly gone down owing to the efforts of the government, healthcare workers, and citizens (Ministry of Health Zambia, 2022).

One week after the first cases, all institutions of learning at all levels were closed to stop the spread of the pandemic (UNDP, 2020). This closure lasted about six months, the longest than any other country in the region, as schools were reopened on September 11, 2020 (WHO, 2020). Only primary and secondary school examination classes (grades 7, 9 and 12) were allowed back in June for them to write their examinations. There is no doubt that the Covid-19 pandemic has put a hard dent on the health and wellbeing of the global population. Added to compromised physical health, the impact of the pandemic (and lockdown regulations) has been multi-systemic, leading to diminished societal mental health, restricted access to healthcare and support services, and increased economic precocity (Petric, 2020; Li *et al.*, 2019). Some of the negative effects of Covid-19 pandemic impacted on vulnerable populations particularly adolescents due to lockdowns which limited their access to education, psycho-social support services and placed many at risk of domestic violence (Sserwanja and Kawuki, 2021). Experts have also thrown the spotlight on the adverse impact the pandemic may have on the SRHR of adolescents, projecting increases in teenage pregnancies alongside decreases in access to SRHR services, including safe abortion, and contraceptives, particularly access to condoms (Govender *et al.*, 2020; Riley, 2020).

Access to SRHR information and services such as contraceptives and safe abortion are human rights issues that are pertinent to human and sustainable development as they are associated with gender equality, the health and wellbeing of new born babies, children, adolescents, and women

(Kangas, Haider and Fraser, 2012; Starrs *et al.*, 2018; Meherali *et al.*, 2023). The 2030 Agenda for Sustainable Development and the movement toward universal health coverage have been pivotal in promoting SRHR, particularly biased towards specific aspects, including contraception, maternal and new-born health, and HIV/AIDS. During the past few decades, countries around the world have made outstanding improvements in the promotion of SRHR and improving access to SRHR services but the gains have been inequitable in particular within developing countries where services have been often inadequate in coverage and quality. In African countries, for example, gender inequality, poor infrastructure, poverty among women, limited economic resources and increased levels of violence against women, particularly the genital mutilation of women, have significantly impeded the access to SRHR services by women and adolescents (WHO, 2021).

Adolescence is the most crucial time to lay the foundation for healthy sexual and reproductive lives to address issues that disproportionately impact adolescent girls, such as harmful gender norms, early marriage, and gender-based violence (Starrs, Ezeh and Barker, *et al.*, 2018). Lack of accurate information is a driver of risky sexual behaviour and poor reproductive health (WHO, 2018). When adolescent girls and young women are equipped with the knowledge to make decisions about their sexual and reproductive health and rights (SRHR), and when barriers to accessing health services are addressed, they are more likely to fulfil their potential, finish their education, and find economically empowering jobs (Women Deliver and The Population Council, 2019).

Adolescents in Sub-Saharan Africa (SSA) face the most significant SRHR challenges and bear the brunt of hostile SRH outcomes (Chandra-Mouli, Neal and Moller, 2021). Globally, young women make up more than 60% of all young people living with HIV, and in Sub-Saharan Africa that rate increases to 72% (UNICEF, 2011). Added to that, child marriages are on the rise in West Africa, and adolescent girls in SSA are hampered to have access to modern contraceptives (Chandra-Mouli, Neal and Moller, 2021), contributing to increases in adolescent pregnancies. The incidence of adolescent pregnancies in Africa before the Covid-19 pandemic has been approximated at 18.8% (Kassa *et al.*, 2018). Nonetheless, the last decade has seen improved interest and awareness of the sexual and reproductive health of women and adolescents in Africa (Allen, 2021; Ahonsi, 2017). Many have defined this as a state of wellbeing where adolescents have rights to be free from sexual violence, unwanted pregnancies, unsafe abortions, have access to the highest

attainable standard of health, are protected from sexually transmitted infections, and have access to information and education related to sexual and reproductive health (WHO, 2018). The implication that this has is that adolescent SRHR need to have access to services, support and education that promote their safety and freedom of choice. SSA has scored success in developing reproductive health policies and improving laws to provide a framework for the implementation of SRHR programmes (International Planned Parenthood Foundation (IPPF); Maputo Plan of Action [MPoA] 2016–2030). For the Operationalization of the Continental Policy Framework for Sexual and Reproductive Health and Rights 2019). An example given would be that of the MPoA which was implemented between 2008–2009. An assessment of the implementation of the Maputo Plan of Action revealed that even if most countries have formulated SRH policies, they have not really translated these into the provision of services. Answering to the limitations of MPoA, a Revised Maputo Plan of Action (MPoA) 2016–2030 came into play at the 27th African Union (AU) Summit in July 2016 aiming to strengthen the call for universal access to comprehensive sexual and reproductive health services in Africa and is the basis for the Sustainable Development Goals (SDGs) (2019).

Young people go through many physical, psychosocial and emotional changes as they move to adulthood. This period is also crucial for young people because they gradually establish health promoting behaviours that will contribute to their present and future well-being (WHO, 2014). For the WHO, a person is in good reproductive health if they can have children, control their fertility, engage in sexual activity, and take pleasure in it. In addition, it refers to safe pregnancies, deliveries, sexual encounters, and the use of contraceptives. It also has to do with the methodologies, techniques, and services that contribute to reproductive health through the prevention and treatment of associated challenges (WHO, 2019). Meeting the sexual and reproductive health and rights (SRHR) needs of adolescents is one of the major concerns of governments and institutions around the globe, and especially, in Africa (Keogh *et al.* 2018; Melesse *et al.*, 2019). Access to information, contraceptive usage and ability to make informed sexual decision and practice safe sexual life are mired by several barriers like financial constraints, cultural limitations, misconceptions, limited access to adolescent-friendly services and stigma and discrimination in developing nations (Cortez *et al.*, 2014; Oronje *et al.*, 2021). These barriers are often founded on both structural and sociocultural norms/expectations that shroud sexual issues in

secrecy, making it particularly challenging for groups like adolescents to harness available resources (Bacchus *et al.*, 2019)

Sexuality education is an important tool that many governments in sub-Saharan Africa are using to reach adolescents with information and services on SRHR in tandem with national and international directives (The African Union Commission [AUC], 2016 and UNFPA, 2013). The transition has changed from public education to comprehensive sexuality education that target both in-school and out-of-school adolescents and integrates several stakeholders like teachers, parents and health providers (UNESCO, 2015). However, concerns on privacy, stigma and discrimination as well as inadequate delivery of information and services are among a few challenges this mode of communication is riddled with (Keogh *et al.*, 2018; Eisenberg *et al.*, 2012:83).

Additionally, in the face of emergencies such as the Covid-19 pandemic, face-to-face strategies prove to be ineffective because of restrictions, including lockdowns, curfews and other safety protocols (UNDP, 2020). The need, thus, to use other effective approaches which encourage privacy and reduce stigma becomes not only categorical but also timely. Such a need is supported by Guse *et al.* (2021), who posit that in the twenty-first century, digital technologies have become a necessity and possess the power needed to offset the challenges associated with SRHR face-to-face communication strategies. For instance, the MPoA has emphasised advocacy for the use of new communication technologies (AUC, 2016). In addition, with the continual increase in the possession of mobile phones and other communication devices among the youth (International Telecommunication Union, 2021), using digital technologies in SRHR has the potential to bring about a lot of advantages. The advantages of digital technologies in SRHR could be leveraged upon in the face of the Covid-19 pandemic restriction measures which amplified the incidence of negative SRHR outcomes for women and girls especially in low-income and-middle income countries, for example; school closures brought about an increased risk and incidence of pregnancy among adolescent girls in regions of sub-Saharan Africa, thus worsening their SRHR needs as far as contraception and safe abortion (Goga *et al.*, 2020; Zulaika *et al.*, 2022).

According to Goga *et al.* (2020) and Zulaika *et al.* (2022), there are several Covid-19 pandemic-related issues that could lead to detrimental effects on adolescents' sexual and reproductive health and rights, and these are: First, lockdown measures which are disrupting contraceptive supply chains and the ability to travel to health facilities, putting young people at greater risk of

unintended pregnancy by reducing their access to information and contraceptive services. Second, school closures are leading to reduced access to sexual and reproductive health supplies and information for adolescents, including critical interventions offered in school settings, such as comprehensive sexuality education. Third, the economic crisis has driven increases in gender-based violence, child marriage and other rights violations that threaten young people's health and well-being.

The Covid-19 related issues have also affected the SRHR needs of adolescents in Zambia. During the Covid-19 pandemic, the uptake SRHR services among adolescent girls in Zambia faced significant challenges (UNFPA, 2020). Lockdowns, school closures, and restrictions on movement limited their access to SRHR information, essential health services, including contraception, maternal healthcare, and HIV prevention (WHO, 2020). The pandemic also led to increased gender-based violence, child marriages, and unintended pregnancies, further undermining the SRHR of adolescent girls (UNICEF, 2020). Healthcare providers faced shortages of personal protective equipment, limiting their ability to provide essential services, including SRHR care (WHO, 2020). In the wake of these challenges, some adolescent girls and dedicated healthcare providers found innovative ways to maintain some form of access to SRHR services, including telemedicine, community outreach, and home-based care (UNFPA, 2020) but these efforts were often not enough and the pandemic's impact on SRHR uptake among adolescent girls in Zambia remains an issue.

The Covid-19 induced closure of schools hampered the continued learning of comprehensive sexuality education intended to empower young people with vital information on SRHR thereby attacking the principal that every person has a right to scientific and sound information on sexual reproductive health and rights, and CSE (UNFPA, 2017). The aim of CSE is to empower adolescents to make informed decisions to prevent unintended pregnancies, sexually transmitted infections and ill-health in general (UNFPA, 2017). This aim is informed by Zambia's CSE framework which is aligned to what is UNESCO's framework, whose overall objective is to respond to the insufficient and unequal access to SRH knowledge among adolescents which leads to a myriad of SRH challenges (Chavula *et al*, 2023). The framework is a part of the Zambian School curriculum, and integrated in all the subjects for grades 5-12 (Chavula *et al*, 2023). The prolonged closure of schools due to the Covid-19 pandemic exposed adolescent girls to more

vulnerability to pregnancy and child marriages which could contribute to the country's already high maternal rate (UNFPA Zambia, 2021). During the peak periods of the Covid-19, Zambia recorded high rates of maternal deaths (UNFPA Zambia, 2021). Numerous studies reported an increase in SRH challenges among adolescents and young people such as early and unintended pregnancies and child marriages during school closures due to Covid-19 (UNESCO, 2020). During the Covid-19 pandemic, Zambia experienced a surge in fertility rates especially among adolescent girls according to preliminary data from health facilities (UNFPA Zambia, 2021). About 54 school-going teenage girls in Chinsali district of the Northern province of Zambia fell pregnant during the premature closure of schools due to the Covid-19 pandemic (*The Times of Zambia*, Ndola, April 13, 2021). Similarly, Masaiti district of Copperbelt province experienced an increase in teenage pregnancies and early marriages due to the continued closure of schools because of Covid-19 as the girls' and boys' stay away from school provided an environment for them to engage in illicit sex (*Zambia Reports*, August 26, 2020).

The fear of contracting Covid-19 caused adolescents to shun health facilities for sexual and reproductive health services [and information] leading to a low use of services such as family planning (UNFPA Zambia, 2021). Lockdowns/restrictions on movements, the closure of schools (and access to CSE], and young people shunning health centres for fear of contracting the Covid-19 virus limits adolescents' contact with health professionals to access health information and services (*Zambia Daily Mail*, June 18, 2021). According to the Centre for Reproductive Health Services, there is a growing concern at the decreasing numbers of young people accessing sexual reproductive health [information and] services like family planning due to the Covid-19 pandemic because people are scared to go to health facilities for fear of contracting the Covid-19 virus (*Zambia Daily Mail*, June 18, 2021).

To contextualize the adolescent SRHR challenges in Zambia in the face of the Covid-19 pandemic, it is necessary to also highlight some of these challenges before the dawn of the pandemic. Before Covid-19: 29.1% of adolescents in Zambia had given birth in 2018 (Zambia Demographic and Health Survey, 2018), early marriage, exposure to media, and lack of knowledge about sexual health and contraception contributed to adolescent pregnancy (UNFPA, 2019). Adolescent pregnancy was more prevalent in rural areas, with some areas reaching 42.5% (Ministry of Health, 2017). According to the World Bank (2019), one's level of education was a key determinant of

adolescent pregnancy, with prevalence decreasing proportional to increasing levels of education. With the dawn of the Covid-19 pandemic, adolescent pregnancy rose because of school closures, economic stress, and disruptions to sexual health services (UNFPA, 2020). This was exacerbated by lockdowns and movement restrictions which led to increased exposure to sexual violence and exploitation, other contributing factors to adolescent pregnancy (Human Rights Watch, 2020). Additionally, Covid-19 caused disruptions to contraceptive supply chains and reproductive health services which cut off adolescent girls' access to contraception and safe abortion services (International Planned Parenthood Federation, 2020) making them vulnerable and succumb to early pregnancies. Adolescent pregnancy was further exacerbated by poverty, gender inequality, and social isolation (Save the Children, 2020)

Apart from the above mentioned adolescent SRHR challenges heightened by Covid-19, there was an increase in early marriages, although the actual number that occurred since the beginning of the Covid-19 crisis is un-established, it was estimated that up to 10 million more girls were going to be at risk of becoming child brides as a result of the pandemic (UNICEF, 2020). Zambia faces the challenge of child marriages and is among the 20 hotspots of child marriages in the world with 31% of women aged between 20-24 having been married by age 18 (UN Women, 2020). Child marriage is also referred to as early marriage, and it is defined as a marriage in which at least one of the parties is below the age of 18 (Plan International, Policy Brief, 2014). Although still high, at 31% (UN Women, 2020), child marriages in Zambia have seen a reduction since 2014 when the statistics stood at 42% (Plan International, Policy Brief, 2014).

Child marriage is associated with high levels of poverty, with many parents withdrawing their daughters from school and offering them for marriage to older men in exchange for payment of a dowry (Girls Not Brides, 2020). While the Marriage Act of 1918 in Zambia establishes 18 years for females and 21 years for males as the legal age for marriage, although this provision rarely applies in customary law (Girls Not Brides, 2020). It should be mentioned here that, in December of 2023, the 1918 marriage act was outlawed and raised the marriageable age to 18 even under customary law (Marriage Amendment Act, 2023). Covid-19's contribution to early marriages can be gleaned over by comparing child marriage in Zambia before and during the Covid-19 pandemic. Before Covid-19 in 2015, 42% of women aged 20-24 years were married by the age of 18

(Demographic and Health Surveys, 2015). In 2017, child marriage rates were still high, with 31% of women aged 20-24 married by 18 (Demographic and Health Surveys, 2017).

The Zambian government in collaboration with UNICEF and other partners, launched a National Strategy on Ending Child Marriage in Zambia (2016-2021) to bring down child marriage by 40% by 2021 (UNICEF, 2017). Such an initiative faces challenges to realise its objectives in view of the Covid-19 pandemic whose effects have put up to 2.5 million more girls at risk of child marriage in the next five years (UNICEF, 2020). Covid-19 has upset programs aimed at ending child marriage, and its economic and health impacts have increased poverty and vulnerability, making girls more susceptible to child marriage (UNICEF, 2020). This weight of the pandemic on child marriage in Zambia is likely to undermine progress made in reducing child marriage rates (Girls Not Brides, 2020). The Covid-19 pandemic has compounded on the existing challenges of adolescent girls' access to SRHR information and services, thereby putting more girls at of higher risk of contracting sexually transmitted infections including HIV/AIDS, unplanned pregnancies, early marriages, sexual-based violence. Indeed, the closure of schools is said to have hampered access to comprehensive sexuality education, and consequently young people were exposed to sexual activity, and sexual violence at the hands of opportunists. In the process, some young people contracted HIV, while others contracted other sexually transmitted infections (UNFPA, 2021).

Half of the 2, 700 young people involved in the UNFPA survey, reported having missed reliable information about sex and Covid-19 thereby getting forced to use online sources such as social media groups whose trustworthiness they doubted (UNFPA, 2021). In a study in Malawi, it was reported that about 13 000 girls got pregnant, and 40 000 got married before reaching the age of 18 during the Covid-19 school closures (UNICEF, 2021). Indeed, lockdown measures implemented to prevent the further spread of the Covid-19 pandemic forced many schools around the globe to be closed thereby leaving about 1.54 billion young people out of school, and worse even fewer young people receiving vital CSE (Plan International, 2021). Given the reality of the pre-Covid-19 adolescent SRHR challenges, and the estimations of this situation worsening due to Covid-19, the need for SRHR information and services to protect and promote girls' and young women's reproductive health and rights is more vital than ever (Plan International, 2020), hence the need to explore mobile media as an SRHR information resource for adolescent girls.

1.4 Statement of the Problem

Access to sexual and reproductive health and rights services including information is one of the basic human rights (Meherali *et al.*, 2023). Therefore, "all individuals require appropriate SRHR services to maintain their optimal sexual and reproductive health. Adolescents require special guidance, support, and youth friendly services in matters of SRHR as they enter puberty and explore their sexual identity" (Meherali *et al.*, 2023). Unfortunately, adolescent girls in Zambia are disproportionately affected by SRHR challenges, including early pregnancies, child marriages, and limited access to contraceptives and health services. According to Kambole *et al.* (2020), young people have limited access to sexual reproductive health and rights information, and consequently, they are at risk of unintended pregnancies, STIs including HIV and AIDS, and unsafe abortions. In many parts of Zambia, it is a taboo for young people to openly discuss issues of sexuality and sexual reproductive health, for example discussions on methods of pregnancy prevention, methods of preventing sexually transmitted infections which are culturally acceptable are restricted to abstinence (Kambole *et al.*, 2020). Kambole *et al.* (2020), argue that this situation makes it difficult for young people to acquire sexual reproductive health information and guidance on how to navigate their sexual reproductive health and rights challenges.

To address the adolescent SRHR information and services challenges in Zambia, the government introduced Comprehensive Sexual Reproductive Health Education [CSRHE] and life skills education (Zulu *et al.*, 2019; Kambole *et al.*, 2020). This was intended to equip children and young people with the necessary SRHR information and knowledge to enable them to make healthy and responsible choices for their lives (UNESCO, 2021). Another measure which was put in place was youth friendly corners. Youth friendly corners were introduced as spaces for young people to receive sexual reproductive health and rights information, and services such as treatment of STIs, care for HIV, and counselling in an atmosphere that is non-prejudicial from adults (*Lusaka Times*, October 20, 2020).

While measures such as CSRHE and youth friendly corners were put in place in response to critical health and social problems including but not limited to high levels of HIV and AIDS and unintended pregnancies (UNESCO, 2021), the onset of the Covid-19 pandemic created serious setbacks to the sustained implementation of these measures. Covid-19 brought another dimension to the adolescent access to SRHR information. Healthcare facilities shifted attention to Covid-19

and related cases, while Covid-19 containment measures impacted on adolescent access to SRHR information. The Covid-19 pandemic robbed adolescents of the public spaces from which to access sexual reproductive and health information due to the public health measures such as lockdowns and restrictions on movements, closure of schools (UNFPA Zambia, 2021). Disruptions in the provision of SRHR information and services impacted negatively on the health and well-being of women and adolescent girls (Nanda *et al.*, 2020; Meherali *et al.*, 2023). In addition, "The closure of schools and SRH clinics limited opportunities for adolescents to gain comprehensive SRH education and utilize SRH services or products" (Meherali *et al.*, 2023). Globally evidence shows that restrictions and supply disruptions brought on by the Covid-19 pandemic reduced access to SRHR information and services around the world (Larkin, 2022). It is argued that disruptions may have contributed to as many as 2.7 million unexpected pregnancies in the pandemic's first year. In Zambia, Lusaka province reported 22000 teenage pregnancies in 2020 alone (*Lusaka Times*, February 26, 2021).

The above examples demonstrate that the pandemic heightened adolescent SRHR issues, and also limited traditional avenues for SRHR education and support. Mobile media emerged as a crucial alternative, yet its efficacy and limitations in this context remain underexplored. Indeed, the nexus between mobile media and access to SRHR information during Covid-19 in the context of low- and middle-income countries like Zambia is not adequately explored. This study addresses this gap by investigating the opportunities and limitations provided by mobile media to adolescent girls in accessing SRHR information during the pandemic. The need to navigate and explore this space is paramount to uncover evidence of whether and how vulnerable populations such as adolescent girls accessed this important information. This work fills the gap in literature and has potential to contribute to policy interventions with a bias on mobile media and sexual and reproductive health and rights information for vulnerable populations such as adolescent girls.

1.5 Justification of the Study

Following national directives on working at home via digital technology due to the Covid-19 Pandemic, this study seeks to investigate the role of mobile media in aiding adolescent girls of Lusaka, Zambia to access SRHR information while they were at home to avoid contracting the coronavirus. During this time, movements were restricted, schools were closed twice, with the

longer closure being six months, and there was fear of contracting Covid-19 if they visited health centres or any other sources of information such as youth friendly corners, and libraries. The study restricts itself to the period from when the first case of Covid-19 was confirmed in Zambia to when the Covid-19 vaccination exercise was launched.

The need for this study is based on the paucity of research in Zambia and Africa on adolescent engagement with mobile media to access SRHR information during Covid-19. This is the knowledge gap that this study sought to fill. This justification will be elaborated further in chapter 2 of this thesis. At this stage it suffices to point out that some studies have been done in Zambia and in Africa, even beyond Africa on adolescent SRHR both before and during Covid-19. For example: Akinfaderin-Agarau *et al.* (2012, Nanda, Tandon and Khanna (2020), Phiri *et al.* (2021), Simpson *et al.* (2021), Joel *et al.* (2021), Groenewald, Isaacs, and Isaacs (2022) Meherali *et al.* (2023). However, none of these studies have explored mobile media for adolescent girls' access to SRHR information during Covid-19 pandemic in Lusaka, Zambia, hence the need for this study to fill this knowledge gap by providing a Zambian context specific dimension to the body of knowledge.

Since this study is based on the Zambian context, for the purposes of justifying the need for this study, it is worth pointing out that the studies which have been done in Zambia around the Covid-19 pandemic have tended to look at the impact of Covid-19 on education, spreading, testing and vulnerability (Phiri *et al.*, 2021, Mulauzi *et al.*, 2020). Additionally, such studies did not specifically focus on adolescent girls in terms of their sexual reproductive health and rights information needs. For example, a study on health information literacy in Zambia, was conducted by Mulauzi *et al.*, (2020). This study differs from this research as it focused on health information literacy, information needs and information seeking behaviour of mothers with children who are below five years of age. This study focuses on access to health information on SRHR by adolescents via mobile media. Additionally, this study has used the Covid-19 pandemic as a context to explore the subject of access to sexual reproductive health information by adolescents. Furthermore, this study takes a different dimension by looking at adolescents' access to health information on sexual and reproductive health via mobile media during Covid-19.

Another dimension for the justification of this study is the argument by Groenewald, Isaacs and Isaacs (2022), that there is a dearth of research on the impact of Covid-19 on adolescent sexual

reproductive health on the African continent. While my study does not focus on the impact of Covid-19 on adolescent sexual reproductive health as such, it does not escape from discussing this impact, because it is precisely based on this impact that adolescent girls sought solace in mobile media to access SRHR information. The argument by Groenewald, Isaacs and Isaacs, in my view does not only justify the need for more studies on the impact of Covid-19 on adolescent SRHR needs on the African continent, but also opens doors to the need for related studies on how adolescents responded to the impact of the Covid-19 pandemic on their need for SRHR information. This is where my study comes in, to explore the use of mobile media in adolescent access to SRHR information in the face of public health measures which restricted adolescents' movements and closed their public spaces through which they accessed information prior to Covid-19. My study therefore contributes to the call for more studies on the African continent on SRHR adolescent needs during Covid-19, by bringing in the Zambian experiences of adolescent girls as they engaged with mobile media to access SRHR information in the face of Covid-19 restrictions. Additionally, this research contributes to understanding the potential of mobile media as a platform for addressing SRHR information challenges in low-resource settings.

The topic on adolescent girls SRHR information needs is a culturally sensitive one as argued by Phiri *et al.* (2021), however, it is one that must be delved into because of its significance to the promotion of the health and wellbeing of adolescent girls and society through dealing with sexual health issues. Therefore, the justification for undertaking a sensitive topic on adolescent SRHR is guided by the argument given by Shirmohammadi, *et al.* (2018) as they argue that:

> Studies on sexual health and sensitive topics become important in the case of the widespread occurrence of some high-risk sexual conditions, such as HIV, sexually transmitted diseases (STDs), unwanted pregnancy and unsafe abortion due to some risk factors such as very young age at the time of first sexual relationship, multiple sex partners, extramarital relationship, and above all, the lack of any education and information provision especially among adolescents (2018:157).

1.6 RESEARCH QUESTIONS

1.6.1 Main Research Question

- What is the level of access to Sexual and Reproductive Health Rights (SRHR) information among adolescent girls through mobile media during the Covid-19 pandemic?

1.6.2 Research Questions

This research focused on five related sub-questions, which are:

1. How did adolescent girls in the four selected schools in Lusaka, Zambia, employ mobile media to access information on SRHR during Covid-19 pandemic?

2. What were the affordances and limitations of mobile media for adolescent girls accessing SRHR information during the Covid-19 pandemic?
3. What were the main sources of SRHR information for adolescent girls on mobile media during the Covid-19 pandemic?
4. How did mobile media participatory activities of adolescent girls enhance their access to and sharing of health information on SRHR during Covid-19?
5. How can the experiences of adolescent girls with mobile media translate into a post-Covid-19 context for access to SRHR and use of information gained?

1.7 AIMS AND OBJECTIVES OF THE STUDY

1.7.1 Main Aim

To assess the availability, accessibility, and utilization of SRHR information among adolescent girls through mobile media, and to identify the barriers and facilitators to accessing SRHR information through this platform during the Covid-19 pandemic.

1.7.2 Objectives

1. To investigate how adolescent girls have employed mobile media to access information on SRHR during the Covid-19 pandemic
2. To evaluate the affordances and limitations of mobile media for adolescent girls' access to SRHR information during the Covid-19 Pandemic
3. To identify the main sources of SRHR information on mobile media during the Covid-19 pandemic
4. To assess the role (if any) of adolescent girls' mobile media participatory activities in their access to SRHR information during the Covid-19 pandemic
5. To assess how adolescent girls' experiences with mobile media can translate into a post Covid-19 context for access to SRHR.

1.7.3 Significance of Study

The focus on young people's experiences of accessing SHRH through mobile media is situated within media and cultural studies' approaches to health communication (Tulloch and Lupton, 1997; Seale, 2003, 2004; Lewis, and Lewis, 2014; Marinescu and Mitu, 2016a, 2016b), and in particular research that explores young people, health and participatory media cultures (Goodyear, and Armour, 2018; Syed-Abdul, Gabarron and Lau, 2016). Uniquely, this research focuses on mobile media (as opposed to social media). The term "mobile media studies' reflects 'a shift from a communication device to a broader suite of activities and potential analyses' (Horst, 2013: 147; Hjorth, Burgess and Richardson, 2012; Goggin and Hjorth, 2014; Jones, Karnowski, Ling and Von Pape, 2013). In defining this third generation of mobile communication studies, Horst highlights the importance of 'understanding the changing mobile media infrastructures which underpin the ways mobile media operates in various contexts', noting the importance of studies from the global South which draw attention 'to the dynamics of power as they emerge through the technical, social, political, and regulatory infrastructures' (Horst, 2013: 148). A key feature of mobile media studies research is that it has always been focused on 'youth' and 'young people' (Goggin, 2013). 'Mobile Youth Culture' as a concept thus refers 'to the idea that there are distinctive ways in which adolescents use mobile media to support and enhance their everyday lives' (Vanden Abeele, 2016: 86). Goggin argues that more research is needed 'that brings together understanding of the interactions among social, cultural, psychological, and developmental aspects of youth and mobile communication' (Goggin, 2013: 85). This is particularly important for research from the global South, including Africa (Goggin, 2013: 86). This thesis through its focus on young people's engagement with mobile media to access SHRH during the Covid-19 pandemic makes such as a contribution. As such, this thesis also makes a contribution to the 'to study audiences and users in Africa' from a critical, qualitative perspective to better understand how African audiences make sense of, and relate to, media forms in their everyday lives (Willems and Mano, 2017: 4). This research imperative demands 'qualitative, interpretive insights that generate nuanced understandings of the dynamics, processes and mechanisms of media practices' in Africa (Helle-Valle, 2017: 29). Research that explores young people's digital and mobile media practices and participation in Africa remains underdeveloped (Uzuegbunam, 2024).

By leveraging mobile media, adolescent girls in remote or hard-to-reach areas can access SRHR information and services, helping to address geographical barriers and gender inequality. This can empower adolescent girls to take control of their health, well-being, and lives, promoting autonomy and agency. The study's findings have potential to also inform policy and program development, helping to create effective and targeted interventions that address adolescent girls' SRHR information needs. Overall, the study highlights the potential of mobile media to improve adolescent girls' access to SRHR, promoting their health, well-being, and human rights.

1.8 STRUCTURE OF THE THESIS

1.8.1 Chapter One: Introduction

This chapter presents the introduction of this study and the background of the research. It frames the topic of the study, research problem, research questions and research objectives. It also presents the justification for the study.

1.8.2 Chapter Two: Literature Review

The literature review chapter presents an overview of literature that has been published on the topic of this study: adolescent girls' SRHR information and mobile media. It further presents literature on Covid-19 to contextualise the study within this health crisis. The chapter also discusses SRHR in health crises situations. This chapter situates this research within the domain of media and cultural studies. The literature paints a picture of the global adolescent SRHR situation, then the African situation before focusing on the Zambian situation. In addition, it discusses the understanding of mobile media from its historical context, and how it has evolved to be pervasive in modern society. The literature discusses linkages between SRHR and mobile media, and how adolescents experience mobile media engagement in their health-seeking behaviours. It also highlights the positives and negatives of mobile media use in the search for SRHR information before focusing on context specific challenges of mobile media use in Zambia.

1.8.3 Theoretical Framework

This chapter outlines the theoretical framework applied in this study. The study used two theories: participatory culture theory, and self-determination theory. These theories provided a nuanced

understanding of how adolescent girls engaged with mobile media to construct meaning, develop motivation and agency to access SRHR information during the Covid-19 pandemic.

1.8.4 Chapter Four: Research Methodology

This chapter discusses the qualitative research design, and approach adopted by this study. It explains the philosophical underpinnings of this research and presents methods of data collection and analysis of findings. Furthermore, it presents the sampling criteria adopted for this study as well as the inclusion and exclusion criteria. It also presents the process of ethical clearance.

1.8.5 Chapter Five: Data Management and Analysis

This chapter 4 is about how the collected data from the FGDs was managed and analysed. The data is managed thematically.

1.8.6 Chapter Six: Analysis and Interpretation of Findings

This chapter analyses and interprets the first four themes: 1) Affordances of mobile media, 2) Unceasing tension between online privacy and public privacy, 3) Embracing Information and Knowledge, but not without discernment, 4) Barriers/Limitations to mobile media use for SRHR information. These themes are under the umbrella of Mobile Media. The interpret of findings are in relation to the theoretical framework and literature review used in this study.

1.8.6 Chapter Seven:

This chapter analyses and interprets the last four themes: 5) SRHR through the Cultural Prism, 6) Transitioning, 7) Detached yet attached, 8) Google as a Grandmother. Again this is done in light of the theoretical framework and literature review used in this study. The themes are under the umbrella theme referred to as: Drinking from Two Fountains: Cultural and Modern Spaces in Adolescent Girls' SRHR Conversation.

1.8.7 Chapter Eight: Conclusion

The conclusion captures the main lessons of this study in relation to the research questions. It highlights the contribution of the study to literature and makes recommendations for future studies.

In summary, this chapter has introduced the context and background of the study, highlighting the importance of adolescent girls' access to SRHR information during the Covid-19 pandemic in

Zambia. The problem statement and objectives have been outlined, and the research questions and Justification of the study have been presented. The stage is now set for the literature review in Chapter Two, which will explore the current knowledge and evidence related to adolescent girls' access to SRHR information through mobile media, and the impact of the Covid-19 pandemic on this access. However, before literature review, it is important that I give the thesis structure for ease of guidance to what the rest of the thesis contains, and how the chapters follow each other.

CHAPTER TWO

Literature Review

2.0 Introduction

This chapter reviews literature that has been previously published on mobile media as a source of information for the health issues concerning sexual reproductive health and rights for adolescents. This study brings two literatures together: SRHR, and Mobile Media. The key concepts in this study make up the sections in this chapter: adolescents' sexual reproductive health and rights and mobile media. The review of literature on SRHR and mobile media situates this study within the realm of cultural studies as the study focuses on the experiences of adolescent girls' engagement with mobile media for access to SRHR information in the context of the Covid-19 pandemic. Reviewing two literatures: SRHR and Mobile Media has made the literature review of this study quite long as the study reviewed them individually and also linked them together. While this study is on the role of mobile media in facilitating adolescent access to SRHR information, it places a particular emphasis on mobile phones as an example of mobile media devices.

To define SRHR, it is important to start by defining SRH because as we shall see, SRHR encompasses everything in SRH while making additions to it because as argued by Ann Stars *et al.* (2018), the realisation of SRH depends on the commitment to, and fulfilment of SRHR. Put differently, the attainment of sexual health is dependent on the realisation, fulfilment and protection of the sexual rights of all persons (WHO, 2006). SRH is defined as "a state of complete physical, mental and social well-being in all matters relating to the reproductive system. [And] it implies that people [can] have a satisfying and safe sex life, the capability to reproduce, and the freedom to decide if, when, and how often to do so" (UNFPA, 2021). Furthermore, the definition of SRH takes into account different issues pertaining to sexuality whose focus encapsulates the

physical, emotional, and social well-being of a person, and therefore argues for an approach to sexuality that is respectful, and sexual relationships that are free of coercion, discrimination and violence while providing individuals with the possibility of pleasurable and safe sex experiences (McLaren and Padhee, 2021). Similarly, SRH is defined as including "physical and emotional wellbeing and includes the ability to be free from unwanted pregnancy, unsafe abortion, sexually transmitted infections including HIV/AIDS, and all forms of sexual violence and coercion" (Abdurahman *et al.*, 2022:2).

SRHR, in contrast, is defined as the power of individuals to make decisions about their sexual and reproductive and health lives, and to respect other peoples' decisions about their own sexual and reproductive and health lives (Starrs *et al.*, 2018). These rights include but not limited to the right to control over one's body; the power to define one's sexuality and the right to choose one's personal partner; the right to receive respectful; confidential and quality [information] and services about one's sexual health, care for STIs and HIV; comprehensive sexuality education; safe abortion and care; detection and counselling for gender based violence; detection, treatment and treatment of infertility and cervical cancer; care for sexual health (Starrs *et al.*, 2018).

The definition of SRHR includes menstrual health as argued by McLaren and Padhee (2021), as they hold the position that the attainment of sexual health would be incomplete without the inclusion of menstrual health in the broader context of sexual and reproductive health which considers aspects of non-discrimination and no violence. McLaren and Padhee (2021), posited that menstrual health should not be limited to the provision of menstrual products, but should go beyond to embrace the physical, mental, and social well-being of women. Viewed from this context, the right to menstrual health is linked to the enjoyment of other human rights including access to education, movement in public spaces, and the right to personal dignity and autonomy (McLaren and Padhee, 2021).

Access to accurate information on reproductive health is fundamental in ensuring that people maintain their reproductive health because being informed and empowered helps people to protect themselves from sexually transmitted infections (including HIV/AIDS) among other sexual health problems (UNFPA, 2021). Equally important is people's access to safe, effective, affordable and acceptable contraceptives of their personal choice (UNFPA, 2021).

2.1 Adolescent Sexual Reproductive Health and Rights [ASRHR]

Adolescence is a transitory period from childhood to adulthood punctuated with vital changes: physically, emotionally, and psychologically which predispose them to several sexual health and social problems (Kurniasih and Komariah, 2015; Kamanga *et al.*, 2017). In girls, among other characteristics signalling the onset of adolescence, is the arrival of menstruation which marks their transition from girlhood to womanhood (Lahme *et al.,* 2017). The changes that occur during the period of adolescence have characteristics which can potentially lead to high risky health behaviours/problems if not properly managed (Esmaeilzadeh *et al.*, 2018). Some of the problems include risky initiations into sexual activities, causing early pregnancies, early marriages, unsafe abortions, sexually transmitted infections including HIV and AIDS (Kamanga *et al.*, 2017).

There is a wide array of Adolescent Sexual Reproductive Health and Rights as argued by Wakjira and Habedi:

> the components of the adolescents sexual and reproductive health rights (ASRHRs) include the prevention of sexually transmitted infections (STIs) / human immunodeficiency virus (HIV), sexual violence, right to consent of marriage, education and essential health services access and utilization. Moreover, SRHRs include access to SRH care services, such as information relating to sexuality, sexuality education, respect for bodily integrity, choosing own partner, deciding to be sexually active or not, consensual sexual relations and marriage, decision whether or not and when to have children and pursuing a satisfying and pleasurable sexual life (2022:68)

This study utilises the term adolescent as defined by the WHO (2020):

> Adolescence is the phase of life between childhood and adulthood, from ages 10 to 19. It is a unique stage of human development and an important time for laying the foundations of good health. Adolescents experience rapid physical, cognitive and psychosocial growth. This affects how they feel, think, make decisions, and interact with the world around them. Despite being thought of as a

> healthy stage of life, there is significant death, illness and injury in the adolescent years.

In Eriksonian developmental theory terms, adolescence is the fifth psychosocial stage, and it is a stage during which an individual is trying to find their identity (Erikson, 1968). For this research, this meant that accessing mobile media for SRHR information is more than a cognitive exercise. It is a search for self-identity. The fact that the adolescent is operating in two spaces (on one hand as a child, on the other hand as an adult), complicates what Erik Erikson refers to as identity and confusion characteristic of this stage (Erikson, 1968). Success, by no means assured, will lead to an ability to stay true to oneself, while failure leads to role confusion and a weak sense of self (Erikson, 1968).

In the Zambian context, the period of adolescence is punctuated with the passing on of sexual reproductive and health information from adult women to adolescents (Kapungwe, 2003). The passing on of sexual reproductive and health information, or the withholding of this information, is shrouded in not only cultural beliefs, but also religious beliefs which influence Zambian society's outlook to matters of sexuality alongside other matters (Kapungwe, 2003). For the Zambian adolescent girl, therefore, accessing SRHR information via mobile media is not without the influence of a worldview that has traditional, cultural and religious beliefs which have a bearing on the adolescent's capacity to act on the SRHR information accessed.

To plan for their lives properly, adolescents need to access quality sexual reproductive services and information (Plan International, 2021). However, numerous barriers exist which prevent adolescents and young people from accessing SRHR information and services, and some of these barriers are; lack of knowledge on available services, harmful social norms, gender stereotypes, misinformation on contraceptive use and contraceptives, power imbalances, perceived need to control female sexuality, and other inequities, confidentiality and quality of care (Kambikambi, 2014; Mbadu Muanda *et al.*, 2018; Plan International, 2021).

A fourth of all adolescents in sub-Saharan Africa are reported to have sexual experience, and the levels of sexual education are generally low (Kyilleh *et al.*, 2018). In addition, adolescents and young people in sub-Saharan Africa experience SRHR challenges resulting from early sexual debut, early marriages, risky sexual behaviours involving many sexual partners, and inadequate use of condoms and other contraceptives (Ng'andu *et al.*, 2022). For example, adolescents face

SRH challenges such as unplanned pregnancies, sexually transmitted infections, including HIV/AIDS, unsafe abortion, early and child marriages, teenage pregnancy, and unmet needs for family planning (Wakjira and Habedi, 2022). Although adolescents in general suffer negative SRHR outcomes in sub-Saharan Africa, adolescent girls suffer added risks stemming from several factors such as sexual partner violence, sexual violence from non-partners, early and unintended pregnancies, STIs, restrictive policies, lack of adolescent friendly services which themselves could be due to cultural, religious or societal factors (Ng'andu *et al.*, 2022). Added to these factors, is the SRHR challenges on individual levels which include lack of financial resources, long distances to health facilities, stigma, shame, and misinformation (Ng'andu *et al.*, 2022). Although not exhaustive, some mitigation to these challenges could be drawn from what Plan International (2021) proposes: that countries ought to ensure that comprehensive sexuality education is accessible for all children, adolescents, and young people to gain knowledge and develop necessary skills to make conscious, healthy, and respectful choices about relationships and sexuality.

The argument about lack of SRHR information and/knowledge by adolescents has been advanced as a reason for some of the poor SRHR outcomes among adolescents and young people. For example, according to Shiferaw *et al.* (2014), some studies have revealed that young people possess limited knowledge about sexual reproductive health which translates into decisions that predispose them to contracting sexually transmitted infections, unplanned and unwanted pregnancies, and many other sexual health problems that threaten their wellbeing. A study in Ghana revealed that a lack of knowledge on reproductive health makes adolescents vulnerable to unsafe reproductive health choices leading to activities contributing to unintended pregnancies and sexually transmitted infections including HIV/AIDS (Kyilleh *et al.,* 2018). A study conducted in the Democratic Republic of Congo also revealed that a lack of knowledge in contraceptive use, and misconceptions about contraceptives were some of the barriers to contraceptive uptake among adolescents (Mbadu Muanda *et al.*, 2018). In Ethiopia, a study showed that many adolescents have scanty information about sexual reproductive issues as they acquire sexual health information mostly from their peers who themselves have limited knowledge on the subject (Shiferaw *et al.*, 2014). As is the case in many developing countries, Ethiopia has a strong presence of cultural taboos on sexuality which prevents adolescents from openly and freely discussing matters of sexuality with their parents who could guide them in acquiring appropriate knowledge and skills

for proper decision making regarding their sexual health (Shiferaw, *et al.*, 2014). In a similar manner, Macharia *et al.*, (2021:357) posit that "taboos surrounding discussions about adolescents SRH in most resource-limited settings create constraints and barriers to meet adolescents' needs." Shiferaw *et al.* (2014) argued that a lack of adequate and appropriate information on sexual health matters led to young people's increased sexual activities causing unintended pregnancies and sexually transmitted infections. Additionally, Shiferaw *et al.* (2014) contended that many girls who become pregnant without intending to do so end up procuring illegal and unsafe abortions leading to some having life-long problems such as infertility, while others end up dying. There are other complications that adolescent girls suffer because of a lack of or insufficient of SRHR information as argued by Saha *et al.* (2022: 2):

> The absence of or insufficient SRH information negatively affects fertility decisions and predisposes young women to adverse pregnancy outcomes such as maternal/neonatal mortality, low birth weight, and premature births. It also predisposes young women to preventable gynaecological morbidities such as irregular menstrual patterns, urethral discharge, and burning urination, which result in poor health outcomes.

As is the case in Ethiopia, cited above, Zambia also has a strong presence of cultural taboos around issues of sexuality which are passed on to adolescent girls during initiation ceremonies or rites of passage when they come of age (Kapungwe, 2003), and some taboos do not allow adolescent girls to discuss SRHR issues with adult men. The initiation ceremonies are considered as the most important sources of transmitting information and knowledge on matters of sex and sexuality, and the ceremonies are presided over by elderly women contracted from either within or outside the community to initiate the girls (Kapungwe, 2003). Due to sexual taboos, mothers and grandmothers to the girls being initiated are not allowed to participate in initiating the girls, but aunts are sometimes allowed to be present (Kapungwe, 2003). Once the signs marking the onset on menstruation are observed by an adolescent girl, the mother or a relative contacts an initiator or initiators from the community to begin the process of initiation that would last for about a week, and features things like teaching girls how conduct themselves sexually, how to perform during sexual intercourse, how to take care of a family, personal hygiene during menstruation, how to

please a husband by dancing during sex, how to keep one's vagina dry to give good dry sex to her husband as dry sex is preferred by Zambian men (Kapungwe, 2003).

The discussion of girls coming of age, and having this phase marked by the onset of menstruation brings to the fore the argument that menstruation is a natural biological experience and is fundamental to the reproductive health of a woman (Lahme and Stern, 2017). Lahme and Stern (2017) and Sommer *et al.* (2016) argued that menstruation is in the domain of public health as well as human rights, and precisely on such a basis, every woman has a right to proper menstrual management that is both dignified and healthy. They further point out that unfortunately, many adolescent girls suffer from a lack of accurate health information crucial for their mental, psychological and physical preparation for the onset of menstruation, and how to manage this experience in a healthy and dignified manner. The situation of adolescent girls not having adequate information about menstruation is not unique to Zambia as it is a phenomenon in many low- and middle-income countries (Njee *et al.*, 2024). Due to challenges associated with lack of adequate information about menstruation, adolescents have difficulties managing the onset of menstruation in a healthy and dignified manner (Njee *et al.*, 2024). Traditionally, adolescent girls are not exposed to sexual health information before their puberty as argued by Lahme and Stern:

> Before they reached menarche, many girls were kept in the dark about menstruation and related issues of reproductive health. They were either not adequately informed, or not informed at all about the biological changes they would soon experience, nor were they aware of the psychological processes they would face. This is a result of many restrictions imposed by aspects of culture, including certain beliefs and taboos associated with menstruation (Lahme and Stern, 2017: 6).

It is when the adolescent girls come of age that they are exposed to information about menstruation and other issues connected to sexual reproductive health during initiation ceremonies as is argued by Kapungwe (2003) that traditional ceremonies are considered as the most important space for passing information and knowledge on sexual reproductive health to adolescent girls. He further postulates that traditional initiation ceremonies groom the girls to understand that sexual intercourse is an act that a woman should not enjoy as the emphasis is placed on the woman to provide pleasure to the man to the extent that girls are instructed to give in to the husband's sexual demands whenever he wants, save for the time when the woman is on her menstruation as this is

prohibited due to taboos surrounding menstrual blood. Strangely, in all the exposition of sexual reproductive health information and knowledge to adolescent girls, there is no discussion about contraceptives such as condoms (Kapungwe, 2003). If anything, the promotion of condoms is not encouraged during initiation ceremonies as condoms are viewed to be foreign, hostile to reproduction which is the primary objective of sexual intercourse, promoters of sexual promiscuity, and block the enjoyment of sexual intercourse (Kapungwe, 2003).

2.1.3 Sexual Reproductive Health and Rights in Zambia

In Zambia, according to Mulubwa *et al.* (2020) there is a lack of access to sexual reproductive health services among many adolescents because, like many low-and middle-income countries, such services are not considered much in their health service systems. Additionally, the SRHR needs of young people are further impeded by challenges such as poverty, weak health systems, gender-based violence [GBV], abuse, forced marriages, and cultural norms (Mulubwa *et al.*, 2020).

Zambia is reported to have about 25% of married girls between the ages of 15–19 suffering from unmet needs for family planning, and further 30% of this age group having begun childbearing (Zulu *et al.*, 2019). Furthermore, Zambia has a high rate of early marriages, with 31% in the age group of 20–24 having been married before the age of 18 (Zulu *et al.*, 2019). Given the high prevalence of early marriages and high levels of unmet family planning needs, one would expect Zambia to have abortion laws that facilitate easy access to abortion services. However, Zambia's abortion laws, rather than facilitate easy access by adolescents, prove to be a hindrance to abortion services. For example, to obtain legal and safe abortion in Zambia, there is a strict condition requiring the consent of three medical doctors before an abortion can be procured (Zulu *et al.*, 2019). Such a condition is not easy to meet in a country whose doctor to patient ratio is 1 doctor to 12,000 patients, a ratio standing below the WHO recommendation of 1 doctor to 5000 patients (WHO, 2022).

Apart from the insufficient number of doctors, Zambia also lacks sufficient health facilities, and the situation is worse in rural areas where people have to walk for long distances to access medical help (WHO, 2022). With such factors in place, adolescent girls opt to have illegal and unsafe abortions, and this explains why the highest number (80%) of women visiting health facilities due to abortion related complications are adolescents (Zulu *et al.*, 2019). Moreover, 30%–50% of all

the acute gynaecological cases admitted to health facilities are because of abortion related complications (Zulu *et al.*, 2019). Access to legal and safe abortion is part of SRHR as argued by Starrs *et al.* (2018). It is one of the many rights among them the right to contraception, right to choose when to get pregnant, and how often, right to HIV care and treatment, care and treatment of STIs, right to menstrual health, detection and protection against gender-based violence (Starrs *et al.,* 2018; McLaren and Padhee, 2021).

Faced with insufficient and unevenly distributed knowledge about SRHR, whose consequences are SRHR related problems [teenage pregnancies, unsafe abortions, sexually transmitted infections including HIV/AIDS] among young people especially adolescent girls, Zambia, supported by UNESCO developed and rolled out a CSE program in 2014, aimed at addressing unequal access to SRH knowledge, and targeted adolescents from grade 5-12 in all schools (Zulu *et al.*, 2019). CSE is very important in a world estimated to have only 3 out of 10 adolescent girls and young women (15-24) years possessing correct knowledge about HIV (UNAIDS, 2016). Studies on the impact of CSE have demonstrated that it has a positive effect in increasing young people's knowledge and improving their attitudes to sexual reproductive health and behaviours and does not [as claimed by some people] increase sexual activity, and sexual risk-taking behaviours or increase the rates of sexually transmitted infections including HIV/AIDS (UNESCO, 2021). The implementation of CSE in Zambia has had some setbacks, for example some strong cultural assertions that providing sexuality information to young adolescents promotes promiscuity, and should therefore be avoided, while only abstinence should be emphasized (Zulu *et al.*, 2019). According to UNESCO (2021), there is evidence that the programs that have focused solely on abstinence as the only means of reducing the frequency of sex or reducing the number of sexual partners or delaying sexual debut have often proved to be ineffective (UNESCO, 2021). The Zambia National Education Coalition [ZANEC], posits that CSE in Zambia was introduced due to increasing cases of teenage pregnancies, STIs and HIV infections especially among teenage girls (*The Lusaka Times*, October 13, 2021).

The SRHR challenges caused by the Covid-19 pandemic in Zambia are similar to those experienced in some other parts of Africa in which barriers created by lockdowns and movement restrictions have disrupted young people's access to health services like youth friendly clinics, comprehensive care clinics, and access to pre-exposure prophylaxis [PrEP] (Oketch, 2020). The

measures put in place to curb the spread of the Covid-19 pandemic such as lockdowns, self-isolation, restriction on movements disrupted young people's access to youth friendly sexual and reproductive health information and services in a significant manner as reported in participatory research among young people in Ghana, Zimbabwe, Nepal, Kenya, Indonesia, and Uganda, (UNESCO, 2021).

2.1.4 Sexual Reproductive Health and Rights During Health Crises

Health crises tend to stretch health systems and make such systems to fail to engage with adolescents (Chandra-Mouli *et al.*, 2015). If health systems do not engage with and provide education for adolescents, opportunities are lost to promote health and wellbeing during adolescence, and into adulthood because when young women have limited access to SRHR information, they are more likely to have an adolescent birth; face increased risk of maternal mortality; unsafe abortion; and coercion; and become predisposed to contract sexually transmitted infections (STIs) and HIV (Chandra-Mouli *et al.*, 2015). This point is supported by Azmat *et al.* (2021) who argue that disease outbreaks have potential to further weaken health care systems that are already beset with numerous challenges because the outbreaks tend to exert enormous pressure on the delivery of quality healthcare. Additionally, in times of disease outbreaks, stressed health care systems can inundate efforts to deliver health care because of increased demands, and such situations tend to exacerbate the vulnerabilities of certain segments of the population such as women and children (Azmat *et al.*, 2021; Shukla *et al.*, 2023).

A study in Malawi (a country which borders the Eastern Province of Zambia) on the assessment of teenage pregnancies and child marriages during Covid-19, reported a cumulative figure of 45 000 teenage pregnancies, and 13 000 child marriages by July 2020 (United Nations Educational Scientific and Cultural Organisation [UNESCO], 2020). Previous health crises have negatively impacted upon young people especially girls who due to disruptions in their education have been predisposed to gender-based violence, early marriages, unintended pregnancies and genital mutilation (Meherali *et al.*, 2021). The disruption in young people's education arises from the quest by many governments to arrest the spread of the pandemics or health crises by closing social spaces such as schools, community centres, and health centres notwithstanding that these spaces are

crucial to young people's access to comprehensive sexual reproductive health education and services (Meherali *et al.*, 2021). The studies which show an increase in the rates of teenage pregnancies, and child marriages due to school closures owing to Covid-19 are similar what was experienced during the abrupt school closures in West Africa due to the Ebola virus outbreak (World Vision, 2020).

The three examples from Latin America and the Caribbean [*Zika*], West Africa [*Ebola*] and globally [Covid-19] below seem to confirm that the lack of access to SRHR, especially during health crises, is compounded in countries from the global South. In the process, you are not only dealing with the unknown, but cannot adequately address the known. This forms the basis for further investigation of the relationship between health crises and SRHR in the global south.

2.1.5 *Zika*

Between 2015 and 2016, Latin America and the Caribbean experienced an outbreak called *Zika* virus (Beare *et al.*, 2019). The North-eastern region of Brazil was the epicentre of this outbreak which was caused by a mosquito borne virus (Deniz *et al.*, 2020). The virus caused microcephaly and other neurological disorders in babies whose mothers were infected by the virus during pregnancy (Deniz *et al.*, 2020). This outbreak was declared an epidemic of international concern by WHO on February 1, 2016, and this was lifted in November of the same year. According to Azmat *et al.* (2021), the Zika virus infections relate to negative reproductive outcomes including miscarriage, foetal death, still birth, and congenital malfunctions like microcephaly, and intrauterine growth limitation.

In the countries of Latin America and the Caribbeans, sexual and reproductive rights are terribly diminished, and more than half of the pregnancies are said to be unintended, and numerous people lack access to SRH information and services (Beare *et al.*, 2019). For example, the North-eastern region of Brazil which was seriously ravaged by the Zika epidemic generally lacks SRH information and is home to many barriers that prevent people from accessing SRH services (Deniz *et al.*, 2020). This situation becomes complicated by the fact that the virus that causes Zika can also be transmitted through sexual intercourse, and spells adverse consequences for the unborn child (WHO, 2021). For this reason, there is a raised need for information about the risks to the unborn child to be shared with sexually active men and women (WHO, 2021). To be fair to Brazil, it does provide free contraceptives; however, this has not helped to decrease the number of

unintended pregnancies including among adolescents, and the North-Eastern region remains the most affected with adolescent pregnancies (Deniz *et al.*, 2020). There is a general lack of SRH information and services in Brazil, and this could be the reason 1 in every 5 children is born to young people between 10 and 19 years old (Deniz *et al.*, 2020).

Given such a picture in terms of SRH information and services in Brazil, and other parts of Latin America and the Caribbean, the burden of the *Zika* epidemic weighed heavily on women and girls since the virus can be transmitted sexually and has adverse effects on pregnancy outcomes (Beare *et al.*, 2019). Women have an unmet need for contraception, and this unmet need must be understood in terms of lack of SRH information and barriers to access SRH services (Deniz *et al.* 2020). The lack of information on SRH is understood on two fronts: knowledge gaps about contraceptive use, and misconceptions on contraceptive methods' adverse effects and their effectiveness (Deniz *et al.*, 2020).

2.1.6 *Ebola*

The 2013–2016 Ebola epidemic in West Africa which affected countries such as Guinea, Liberia, and Sierra Leone led to many people unable to access the health systems (Sochas, 2017). For example, in Sierra Leone, both patients and some health workers could not access routine health services during the Ebola health crisis because of fear of getting infected. Additionally, "the scarce resources in the health system were diverted to address the crisis and to screen and manage suspected and confirmed cases as well as manage growing numbers of contacts (Sochas *et al.*, 2017:33)." The fear of people going to the hospital due to the Ebola crisis led to an increase in the number of teenage pregnancies as the people could not access SRH services (Ford, 2020). According to the United Nations Population Fund [UNFPA] (2015), the fear of getting infected with the Ebola Virus Disease [EVD] caused people to resist visiting health facilities, and the utilisation of health services was further hampered by the imposed restrictions on movements. The fear of contracting the Ebola virus was also experienced by health workers as they too felt at risk of getting infected through exposure to body fluids and blood while attending to pregnant women (Massaquoi *et al.*, 2021). This fear made health workers to shun attending to pregnant women (Massaquoi *et al.*, 2021). The estimated number of women who got pregnant during the Ebola health crisis is estimated to have been 1 million for the countries of Sierra Leone, Liberia, and Guinea (Massaquoi *et al.* (2021). This health crisis forced the government of Sierra Leone to close several health facilities or turn them into Ebola holding and/or treatment centres (UNFPA, 2015).

This prioritisation of the fight against Ebola had a negative bearing on obstetric services as huge amounts of money were allocated to the fight (Massaquoi, 2021). Evidence shows that there was a reduction in the use of family planning, antenatal care and institutional deliveries (Tang *et al.*, 2020; Lokot and Avakyan, 2020).

Due to the overburdened healthcare systems impacted by the Ebola outbreak, the countries of Liberia, Guinea and Sierra Leone experienced poor use of institutional care, facility-based deliveries, contraceptive use and antenatal care (Azmat *et al.,* 2021). This worsened the exposure of pregnant women to the risk of undetected complications and maternal mortality (Massaquoi, 2021). According to the World Health Organisation [WHO] (2015), the effects of Ebola had gender ramifications as the women were disproportionately affected in manifold ways as they feared to access health facilities which they thought might expose them to the virus. Pregnant women feared dying from Ebola during pregnancy or dying during the time of giving birth. Additionally, some pregnant women who had been quarantined due to exposure to Ebola patients, or corpses of people who had succumbed to Ebola could not access maternal-care services.

Prior to the Ebola outbreak, adolescents were already experiencing challenges regarding SRH information, and this situation was worsened with the dawn of the Ebola Crisis which caused schools to be closed, made mobile services unavailable in the communities, and the services of family planning counselling to be less readily available (UNFPA, 2015). Due to measures of isolation and quarantine during the Ebola outbreak, adolescent girls were more exposed to sexual exploitation, sexual assault, and rape (Massaquoi *et al.*, 2021). Furthermore, due to the socioeconomic conditions caused by the EVD, there was a huge surge of teenage pregnancies reaching 65% (Massaquoi et al., 2021). The closure of schools due to the Ebola crisis caused an increase in pregnancy cases among teenagers, and maternal mortality rose to a staggering 75% over a period of 18 months (Plan International, 2021).

2.1.7 Covid-19

The first case of the Coronavirus (Covid-19) was reported in China in January of 2020, followed by South Korea, Iran, and Italy in February of the same year (Fouad, 2020). In March of 2020, following a surge in the number of confirmed Coronavirus cases which stood at 118 000 across 110 countries, the WHO declared the Covid-19 as a global pandemic on 11 March, 2020 (Fouad, 2020). According to Lloyd B. Mulenga *et al.* (2021), the first cases of Covid-19 in Zambia were

reported on March 18, 2020. The dawn of the Covid-19 Pandemic pushed governments to shift focus towards addressing the Covid-19 pandemic, and this has impacted negatively on areas such as family planning services with potential to lead to increased unplanned pregnancies, abortions, gender-based inequities, gender-based violence since young women and girls are cut off from essential protection services and social networks (Oketch, 2020). Furthermore, the Covid-19 pandemic exposed women and girls to rape, defilement, early and forced marriages (Oketch, 2020).

Although adolescent pregnancy is a global problem, its concentration is in regions ravaged by poverty, lack of education and employment opportunities (WHO, 2020). There are many barriers that adolescents face in accessing contraception which include but not limited to, restrictive laws and policies, misconceptions on where to obtain contraceptives, and how to use them, transportation, health-worker bias, adolescents' lack of knowledge about contraceptives, and a lack of autonomy to use contraceptives (WHO, 2020). The World Health Organisation (2020), estimates that in the developing regions, 12 million girls aged 15-19 years give birth each year, while the statistics for those under 15 are estimated to be about 777, 000. Furthermore, about 10 million pregnancies among the age range of 15-19 are unintended and unplanned, and many girls die from pregnancy related complications (WHO, 2020). In addition to this, about 5.6 million abortions occur annually among adolescents, of which 3.9 million abortions are unsafe, thereby contributing to maternal mortality, morbidity, and long-term health complications (WHO, 2020). Sub-Saharan Africa has high rates of adolescent pregnancy occurring before the age of 18, and among the significant contributors to this situation is low knowledge levels about the risks of pregnancy and sexually transmitted infections (Svanemyr, 2020). In some societies within sub-Saharan Africa, girls are expected to get pregnant within 1 year of getting married while others are expected or rely on transactional sex for sustenance (Svanemyr, 2020).

The Covid-19 pandemic altered the focus of governments and international organisations, global and national health governance environments to a considerable extent, as the political determinants of sexual reproductive health and rights changed (Schaaf *et al.*, 2020). Indeed, the Covid-19 pandemic stretched the health systems especially in countries that were already challenged by insufficient health resources as health delivery services were disrupted, and in some cases management of medical supplies was negatively impacted upon (Haileamlak, 2021). For example,

due to the Covid-19 pandemic, major private suppliers of contraceptives to countries like Zambia, Ghana, Zimbabwe, Uganda, Sudan Sri Lanka, Germany, El Salvador, Columbia, and Malaysia were forced to close, thereby leading to a disruption in the supply chain (Schaaf *et al.*, 2020). The Covid-19 pandemic has been reported to be hampering the availability and distribution of contraceptives and other maternal health medicines, a situation that is life-threatening, and could jeopardise the efforts to ensure universal access to sexual reproductive health (Ford, 2020). Apart from shortages in contraception supplies, there was a problem of women being limited to access whatever little contraceptives that may have been available due to fear of being exposed to the virus as well as restrictions on their movements due to Covid-19 (Yu *et al.*, 2024). In addition, Covid-19 restrictions constrained freight shipments leading to less condom availability in some places (Schaaf *et al.*, 2020).

The Covid-19 pandemic has exacerbated the SRHR situation in that meagre resources and attention have had to be diverted away from sexual reproductive health care in efforts to thwart the spread of the pandemic (Guttmacher Institute, 2021). The Guttmacher Institute (2021), estimated that a 10% reduction in sexual reproductive health care in Low- and Middle-Income Countries [LMICs] would bring the number of women with unmet need for modern contraception to 49 million, causing unintended pregnancies and unsafe abortions and thousands of maternal and new-born deaths.

The sexual reproductive health challenges in Zambia may have been exacerbated due to the Covid-19 pandemic since in times of humanitarian crisis, conflict, and displacements, the already existing vulnerabilities, and lack of access and rights are worsened (Endler *et al.*, 2020). For example, adolescent girls have had limited access to sexual reproductive health information (Malunga *et al.*, 2023), and some of them were shy to attend antenatal services alongside adult pregnant women, and the introduction of youth friendly corners were a measure to help them feel more comfortable to attend antenatal services and acquire SRH information (*Lusaka Times*, February 26, 2021). However, due to Covid-19 restrictions, adolescents' access to SRHR information and services has been hampered since schools suffered prolonged closures, and the face-to-face mobilizations through workshops, drama, seminars and health facilities have been reduced (Chisumpa, 2020). This reality is also supported by Akbarialiabad *et al.* (2021) and UNFPA (2021), who argued that although generally many people had their need for sexual reproductive information and services

affected due to Covid-19, the SRHR needs of young people were especially affected because the spaces from which they accessed sexual reproductive health information and comprehensive sexuality education such schools, clinics, community centres were either closed or inaccessible.

In the midst of the challenges of Covid-19, the Lusaka province of Zambia recorded alarming cases of adolescent pregnancy reaching 22000 in 2020 alone (*Lusaka Times*, February 26, 2021). Out of this total number of 22000, Lusaka district had the highest at 15 928, while Chongwe recorded the second highest at 2 197, Kafue was third at 1 491, and Chilanga was fourth at 1 299 pregnancies recorded (*Lusaka Times*, February 26, 2021). Although these numbers are this high, the Health Specialist at the Lusaka Provincial Health Office, Dr. Bushimbwa Tambatamba, stated that there had been a 21% reduction compared to the previous three years (*Lusaka Times*, February 26, 2021). There are many factors attributed to the high number of teenage pregnancies in Zambia, and some of these, according to Malunga *et al.* (2023), are: early or child marriages, media exposure, knowledge about sexual reproductive health, gender and sexual norms, lack and limited access to sexual reproductive health information and services.

The Covid-19 pandemic has worsened the SRHR challenges that existed before its emergence (Okeleke *et al.*, 2022), and Zambia was not spared from being negatively impacted, since in the times of humanitarian crisis, conflict, and displacements, the already existing vulnerabilities, and lack of access and rights are worsened (Endler *et al.*, 2020). There is a problem of adolescents accessing SRHR information and services due to Covid-19 in that the face-to-face mobilizations through workshops, drama, seminars and health facilities have been reduced (Chisumpa, 2020). Chisumpa (2020), argues that this has been brought about by the restrictions placed on movements, and the closures of schools. Furthermore, the fear of contracting Covid-19 has prevented women and young people from visiting health facilities for SRHR services, and community outreach services have been reduced (Chisumpa, 2020).

In Zambia, there are some studies that have been done around the Covid-19 pandemic and adolescent SRHR needs, but these have not focused on mobile media and adolescent access to SRHR information. The studies done have tended to focus on the impact of Covid-19 on education, spreading, testing and vulnerability (Phiri *et al.*, 2021). For example, a study conducted by Phiri *et al.* (2022:1) focused on "Adapting community-based sexual and reproductive health services for adolescents and young people aged 15-24 years in response to Covid-19 in Lusaka, Zambia:

the implications on the uptake of HIV testing services." This study was conducted based on a *Yathu* [Ours Ours] project implemented in two high density areas of Lusaka. The project conducts its activities by providing comprehensive community-based, peer-led SRH services: HIV testing, and Comprehensive Sexuality Education. Due to the Covid-19 pandemic, the hubs were closed from April to June 2020, forcing the project implementers to innovate means of adapting to the new situation. The adaptation to the induced closures led *Yathu* to deliver CSE via Video on social media. This increased the number of followers on their Facebook page from 539 in April, 2020 to 891 in June, 2020. WhatsApp groups also emerged as spaces through which *Yathu* provided CSE and Covid-19 information. These adaptations led to shunning of the hubs as fewer adolescents and young people went for HIV testing services (Phiri *et al.*, 2022).

The study done by Phiri *et al.* (2022) revealed that after the Covid-19 related closures, the number of adolescents and young people visiting the hubs for the uptake of HIV testing services rose to 73.2% compared to 65.9% before the closures. The study concluded by asserting that social media can play an important role as it could be an added space for adolescents and young people to access information to prevent HIV infections and also Covid-19 (Phiri *et al.* 2022). This study showed mobile media was used during Covid-19 to navigate the challenges of having physical meetings, and therefore its conclusion is important to my study as it justifies the need to explore the wider uses of mobile media through social media spaces beyond individual projects to include girls' access to SRHR information.

Another study that was conducted in Zambia focused on the local characterization of the Covid-19 response based on the lockdown in Lusaka (Muzyamba, 2021). The study aimed at finding out the relevance of lockdowns in a place like Lusaka. The results were mixed as some people supported it as a means of slowing down the pandemic while others condemned it as they blamed it for increasing poverty levels, causing mental health problems, unemployment, gender-based violence, political repression and oppression. The study concluded that lockdowns should be implemented after sufficient dialogue among key stakeholders, including the government and the citizens to craft context-specific interventions that resonate with the local context (Muzyamba, 2021).

Additionally, a study was conducted by Jo *et al.* (2021:1) on "Changes in HIV treatment differentiated care uptake during the Covid-19 pandemic in Zambia: interrupted time series

analysis." The objective of this study was to assess how much change had occurred in the dispensing of Differentiated Service Delivery [DSD] coverage and Anti-Retroviral Treatment [ART] during Covid-19. Differentiated Service Delivery "models aim to improve the access of human immunodeficiency virus treatment on clients and reduce requirements for facility visits by extending dispensing intervals (Jo *et al.*, 2021:1). According to Jo *et al.* (2021), the dawn of the Covid-19 pandemic created a great need to reduce client contact with healthcare facilities and other clients without endangering care and the continuation of treatment. The study findings showed an increase in client-participation in DSD models for stable ART clients after the coming of Covid-19 while there was a reduction in dispensing intervals. Therefore, the study recommended for the removal of obstacles to longer dispensing intervals including those resulting from supply chain management (Jo *et al.*, 2021).

Another study was conducted by Simpson *et al.* (2021) in Lusaka on mobile phone support groups for adolescent girls and young women who were both pregnant and living with HIV. This study aimed at assessing the practicability of mobile phone-based, peer to peer support group intervention for pregnant girls and young women in the age range of 15 to 24 living with HIV in Zambia. The results of this study revealed that the platforms were easy to use, and that participants enjoyed anonymity as they discussed various issues such as social support and relationships, stigma, knowledge about HIV, and adherence to medication. The study concluded that intervention of using mobile phones for support groups of adolescent pregnant women living with HIV was both acceptable and practical. Additionally, the study highlighted the potential of mobile phones in overcoming barriers that prevent adolescent women from accessing important social and psychosocial support. Some of the barriers to accessing social and psychosocial support are inter alia: lack of transport money to visit health facilities, insufficient space in health facilities, overbearing control by male partners, stigma that impedes movement, and responsibilities of managing households (Simpson *et al.*, 2021). This study also justifies my study as it highlights how mobile phones have been used to overcome some of the barriers to adolescent's access to psychosocial help during pregnancy, information and knowledge about SRHR.

Outside Zambia but within the African continent, a study which bears some similarities to mine, was done in Nigeria. This study sought to assess girls and young women's access to mobile phones as well as the barriers and limitations in using mobile phones to access sexual reproductive health

information and services (Akinfaderin-Agarau *et al.*, 2012). The results of the study revealed that there was high mobile phone access by girls and young women, although their use of mobile phones to access sexual reproductive and health information was limited. The identified barriers and limitations to using mobile phones to access sexual health and reproductive information were inter alia: cost of service, request for socio-demographic information which threatened anonymity, poor marketing and publicity, challenges of infrastructure and poor network quality, individual personality and personal beliefs. The study argued for the identified barriers to be sufficiently addressed to increase the potential of mobile phones in the provision of sexual reproductive health information for young girls (Akinfaderin-Agarau *et al.*, 2012).

While bearing some resemblance with my study in terms of focus on adolescents and use of mobile phones, the study by Akinfaderin-Agarau *et al.* (2012), bears some significant differences with my study. The first difference is the location of the study: my study is based on the Zambian situation, specifically Lusaka Province, while the study of Akinfaderin-Agarau *et al.* (2012), was based in Nigeria, specifically in six selected states. The second difference is the timing: the study of Akinfaderin-Agarau *et al.* (2012), was done in 2012 while mine is done between 2019 and 2022. The third difference is that my study uses the Covid-19 pandemic as its context, while the study of Agarau *et al.* (2020), was done 9 years before the Covid-19 pandemic. Additionally, the study by Akinfaderin-Agarau *et al.* (2012), was on the voluntary use of mobile phones by young girls on the provision of sexual reproductive health information, my study is on the enforced use of mobile phones due to the enforced lockdown measures due to Covid-19.

Outside the continent of Africa, some studies have been done focusing on adolescent SRHR needs in the face of Covid-19. For example, in Canada, a study was conducted in a place called Alberta to investigate the impacts of Covid-19 induced health measures on sexual reproductive health of adolescents (Meherali *et al.*, 2023). The study revealed that Covid-19 induced health measures had significant negative impacts on the SRHR needs of adolescents including: limited access to SRH education, services and products (Meherali *et al.*, 2023). My study distinguishes itself from this study for the following reasons: 1) this study was done in Canada, while mine is done in Zambia, 2) this study focused on adolescents in general while my study focuses on adolescent girls specifically, 3) this study focuses on the impact of Covid-19 on adolescent SRHR needs, while my study focuses on adolescent girls' engagement with mobile media to access SRHR information.

Despite the studies that have been done on adolescents' sexual reproductive health needs (Phiri *et al.*, 2022; Muzyamba, 2021; Jo *et al.*, 2021; Simpson *et al.*, 2021; Akinfaderin-Agarau *et al.*, 2012; Meherali *et al.*, 2023; Groenewald, Isaacs and Isaacs, 2022), there is a paucity of research on mobile media and adolescent access to SRHR information in the Zambian context during Covid-19. This is the knowledge gap that this study seeks to address.

While this study focuses on the Zambian context, the impact of Covid-19 on adolescents' access to SRHR information and services has been experienced globally. According to the United Nations Population Fund (UNFPA, 2021), in a survey conducted among an estimated number of 2,700 young people across countries of Indonesia, Zimbabwe, Kenya, Uganda, and Nepal, one third of these young people were unable to access the needed family planning services due to the Covid-19 pandemic. Furthermore, (UNFPA, 2021) reported that closures of schools due to Covid-19 (in Uganda, Kenya, Indonesia, and Zimbabwe) hampered access to comprehensive sexuality education, and consequently young people were exposed to sexual activity, and sexual violence at the hands of opportunists. In the process, some young people contracted HIV, while others contracted other sexually transmitted infections (UNFPA, 2021). Half of the 2, 700 young people involved in the UNFPA survey reported having missed reliable information about sex and Covid-19 thereby getting forced to use online sources such as social media groups (UNFPA, 2021).

2.2.0 Health Seeking Behaviour for SRHR and Online Health-Seeking Behaviour for SRHR

Health Information Seeking Behaviour is defined as "the process of gathering information about health and disease and can be influential for health-related perception and behaviour Schäfer *et al.* (2021:1)," Similarly, Jalilian *et al.* (2021), posited that health information seeking behaviour consists of activities that engage in searching and finding health problems, disease information, health risk factors information, and health promotion. Health information seeking behaviour can also be referred to as the methods that people use to obtain information about health, diseases, health promotion, and health threatening behaviours (Esmaeilzadeh *et al.* (2018). From these definitions, it could be said that "Health information seeking is the purposeful acquisition of information from selected information carriers to fill a gap in specific health information needs" (Basnyat *et al.*, 2018:1).

The era of the 21st century has witnessed massive advancements in technology, and other sources of information on diverse issues of human interest including sexuality (Fraser *et al.*, 2021). Globally, in recent years there has been an exponential increase in the number of people using smartphones, and also an increase in smartphone users downloading applications on their phones (Eleuteri *et al.*, 2018). Young people are increasingly acquiring health information online according to the findings in research conducted in the USA which revealed that 80% of internet users for health information online are young people (Eleuteri *et al.*, 2018). Similarly, Gray *et a* (2005) point out that among the sources of health information utilised by adolescents is the internet as offers them the benefits of convenience and confidentiality. Some of the health information gathered by young people includes sexual health information, which they acquire using their mobile devices (Eleuteri *et al.*, 2018). Hence, it cannot be argued that the Internet is one of the common places where people can search for health information, which explains why four-fifths of internet users search for health information online (Dobransky and Hargittai, 2012). According to Gray *et al.* (2005), the internet has potential to address some of the health information challenges that adolescents are faced with. It can be argued that searching for health information on the Web apparently gives numerous benefits compared to other ways of seeking health information, and this could explain why some people view digital media as a way of dealing with health-imbalances in society (Dobransky and Hargittai, 2012). Some benefits of using the Web for seeking health information are the sense of anonymity and privacy and because of such perceived benefits, the Internet is seen as attractive in offering health information that may be perceived as sensitive or stigmatising (Dobransky and Hargittai, 2012). In spite of the Web being lauded as beneficial to people seeking health information, this has not been without on-going debates on the role of social media and the internet in mediating sexuality out of which context questions have been raised regarding the reliability of the sources of information especially young people's knowledge seeking (Fraser *et al.*, 2021). Additionally, questions are raised about how young people access information on sexuality and sexual health, and the trustworthiness of their sources of information (Fraser *et al.*, 2021). Notwithstanding such debates, Kurniasih and Komariah (2015), asserted that young people continue to use the internet as a source of health information in addition to other sources such as family, friends, and teachers.

Adolescents seek sexual reproductive health information for various reasons; some of which are: to increase knowledge, to keep healthy and to prevent sexually transmitted infections. Additionally,

adolescents seek sexual reproductive health information to do their school assignments, for fun, and for purposes of leading a better life with regard to religion and therapy (Kurniasih and Komariah, 2015). With such various reasons for seeking sexual reproductive information by adolescents, the availability and accessibility of sexual reproductive health and rights information as well as services is important, however, the emergence of the Covid-19 pandemic negatively impacted on both access and availability, due to factors such as lockdowns, travel restrictions, fear of being infected, disruption of supply chains among other factors (Checkol *et al.*, 2023. Indeed, sexual reproductive and health outcomes were adversely affected by the Covid-19 pandemic (VanBenschoten *et al.*, 2022).

Having already provided a brief correlation between health crises and the worsening of adolescent access to their SRHR needs in the section on sexual reproductive health during health crises, here I touch on the harms caused by Covid-19 to the SRHR needs of adolescent girls while at the same time highlighting the general social effects due to Covid-19.

In a study conducted to analyse reproductive health information seeking behaviour mapping among high school students in Bandung City, Indonesia in 2015, the findings were that students acquire sexual reproductive health information from sources such as family, friends, teachers, media and the internet (Kurniasih and Komariah, 2015). These findings were similar to what Esmaeilzadeh *et al.* (2020), found in a survey conducted on adolescent health information seeking behaviour related to high risky behaviours in a selected educational district in Ishan. The high risky behaviours are linked to undesirable outcomes, and examples of such behaviours are: cigarette smoking, physical inactivity, alcohol consumption, substance abuse, high risky sexual behaviours, injury, and violence related behaviours. This survey revealed that adolescents mostly obtain health information via the Internet, and social media (Esmaeilzadeh *et al.* (2020).

There have been divergent views concerning the use of internet and social media as sources of information, and such was exemplified in views expressed in a survey conducted in Australia concerning young people and health (Fraser *et al.*, 2021). This survey revealed that young people did not receive their desired information in formal relationships and sexuality education, leading to proposals that the internet and social media should be used more for sexual health information provision because young people are ardent users of these technologies. These proposals were countered by researchers who raised questions of confidentiality, and potential exposure to online

harm (Fraser *et al.*, 2021). In the midst of such debates "online spaces such as Reddit have increasingly been used by people (including young people) seeking sexual health information and medical diagnosis due to the anonymity they afford" (Fraser *et al.*, 2021:2).

The Covid-19 health crisis caused unprecedented misery and suffering among many people in the world as it changed people's lifestyles, work as well as social interactions (Hosseinzadeh *et al.*, 2022). It strained health systems and worsened disparities that existed prior to the pandemic (VanBenschoten, 2022). Social interactions were negatively affected by the imposition of social distancing and lockdown restrictions leading to the closure of public places, for example; schools, play parks, places of worship, cafes and restaurants (Hosseinzadeh, 2022). In some cases, the imposed lockdowns led to the increase in cases of spouse abuse, while some couples experienced divorce as they could not get intimate due to fear of contracting the virus if they got physically close to their partners (Hosseinzadeh, 2022).

Zambia, like many other countries also suffered in its social and economic aspects due the Covid-19 pandemic, for example; many families lost income as both the formal and informal sectors downsized on their workforce to stay afloat economically, and the health system was strained with rural areas suffering the brunt of it (Saasa *et al.*, 2020). Additionally, the social inequalities especially in cities were worsened by restrictions on movements as the rich could afford to drive to distant, expensive and less congested shops for their supplies, while the poor crowded themselves in shops and markets that were congested and close to their homes (Saasa *et al.*, 2020).

Health crises such as infectious diseases usually negatively affect people in various aspects of their lives, among them; social, physical and economical (VanBenschoten *et al.*, 2022). In terms of impact, the health crises or emergencies tend to affect women and girls the most as they usually exacerbate the already existing disparities (Shukla *et al.*, 2023). For instance, measures put in place to prevent the further spread of a health emergency such as Covid-19 pandemic, like lockdowns, closure of schools, and travel restrictions impacted disproportionately on the human rights of adolescent girls in comparison (Shukla *et al.*, 2023).

According to Shukla *et al.* (2023), the Covid-19 pandemic brought about huge mortality rates among men, but the social and economic burdens of the pandemic was suffered more by women and girls since more women suffered from issues such as: loss of employment, loss of income generating opportunities as many work in the informal sector, loss of social security due to lock

downs, forgoing income as many had to stay home to care for families and relatives, gender based violence due to restrictions of movements. Such views are also held by Plan International (2024) in pointing out that while health crises are not gender specific, they tend to affect females (women and girls) and males (men and boys) differently. For example, the consequences of Covid-19 exposed girls to increased risks such as child, early and forced marriages, violence, early pregnancy, physical, psychological and sexual exploitation/abuse, poor menstrual hygiene management, gender-based violence and child labour (Plan International, 2024; Shukla *et al.*, 2023). According to Shukla *et al.* (2023), disproportionate impact of Covid-19 on adolescent girls were a consequence of the strategic measures put in place to arrest the spread of Covid-19, among them movement restrictions and school closures.

Before the Covid-19 pandemic, young women already faced significant barriers in seeking and accessing essential sexual and reproductive information and services, and with the pandemic affecting and stretching even the most robust of healthcare systems, the risk of SRHR becoming more difficult to access is as high as it is real (Nanda *et al.*, 2020; Meherali, 2021; Plan International, 2021). Some of the barriers experienced before Covid-19 in young women in LMICs, for example in the Lao People's Republic, in accessing sexual reproductive information and services are lack of knowledge and a lack of awareness of services (Thongmixay *et al.*, 2019). Other barriers are: "the feelings of shyness and shame caused by negative cultural attitudes to premarital sex, and fear of parents finding out about visits to public sexual reproductive health services, due to lack of confidentiality in the services and among health providers" (Thongmixay *et al.*, 2019:1). Added to these are challenges of long distances to health facilities, and a lack of sufficient youth friendly clinics (Thongmixay, 2019). These barriers experienced by girls in LMICs, before the dawn of the Covid-19 already exposed them to sexual reproductive health and rights challenges leading to early marriages, unintended and early pregnancies, unsafe abortions, sexual violence and sexually transmitted infections (Meherali *et al.*, 2021). Indeed, young people and adolescents in LMICs are negatively affected by the closure of social spaces such as schools, community centres, and health clinics where many of them access comprehensive education on sexual reproductive and health services due to the Covid-19 pandemic (Meherali *et al.*, 2021).

Globally, but more especially in LMICs, low access to sexual information and services, the diversion of medical personnel towards dealing with the pandemic, the diversion of funds from

already underfunded areas such as sexual reproductive health, the disruption of the production and supply chain, and lockdowns are some of the factors which have led to many women and girls getting pregnant unintentionally and being forced to keep the unwanted pregnancies, and others being forced to procure unsafe abortions (Meherali *et al.*, 2021; VanBenschoten *et al.*, 2022; Chekol *et al.*, 2023). A study conducted in East and Southern Africa showed that Covid-19 induced lockdowns caused inaccessibility of SRH services by adolescents and young people, potentially making this population of people at an increased risk of unintended pregnancies and STIs including HIV and AIDS (UNESCO, 2021). A scoping review of research from across Africa "on the impact of the Covid-19 pandemic on women and girls' access to and utilisation of sexual and reproductive health (SRH) services for contraception, abortion, gender-based and intimate partner violence (GBV/IPV) and STIs" (VanBenschoten *et al.*, 2022:1) revealed a 78% reduction in terms of maternal and child health services, reduction in women giving birth from hospitals as they preferred to give birth from home, reduction in inpatient care, challenged health systems which put a strain on the already challenged vulnerable populations of adolescents and displaced people (VanBenschoten *et al.*, 2022; Chekol *et al.*, 2023).

According to UNFPA (2021), the Covid-19 pandemic has disrupted family planning services for an estimated 12 million women, and as a result there are 1.4 million unintended pregnancies. The disruption of access to family planning services was due to factors such as travel restrictions, interrupted supply chains, stock-outs, and overwhelmed health facilities. The International Planned Parenthood Federation (IPPF, 2020) indicates that the unmet need for contraception is still high globally, and this situation has been worsened by the Covid-19 pandemic. The imposition of lockdowns to thwart the spread of the Covid-19 pandemic led to massive disruptions to the supply chains of contraceptives (IPPF, 2020).

The consequences of disruptions to the supply chains, and closures of major private contraceptive providers would be huge as they would lead to an estimated 10% reduction in the use of short and long-acting reversible contraceptive methods in low- and middle-income countries (Schaaf et al., 2020). This would lead to an estimated 15 million unintended pregnancies over a period of one year (Schaaf *et al.*, 2020). In a global survey, represented by 29 countries, 86% of participants reported a decrease in access to contraceptive services due to Covid-19, and a further reduction in surgical and medical abortion was reported at 62% and 46% respectively (Schaaf *et al.*, 2020).

This situation could be a lot worse for key populations such as the young people who already face various barriers to SRHR information and services before the pandemic because global crises tend to worsen inequities (Meherali *et al.*, 2021). According to Meherali *et al.* (2021), previous epidemics have demonstrated that disruptions in education impact negatively on young people especially girls, in terms of loss of earnings, heightened vulnerability to gender-based violence, early marriages, unintended pregnancies and female genital mutilation. Covid-19, as a health crisis has worsened the already existing adolescent SRHR challenges especially among girls in areas such child marriages, access to contraceptives, access to safe abortion, access to education, and sexual violence (Okeke *et al.*, 2022). A review on the impact of the Covid-19 on SRHR challenges in Sub-Saharan Africa revealed that prolonged closure of schools and lockdowns exposed adolescent girls to increased sexual activities as well as early sexual debuts and early marriages (Okeke *et al.*, 2022).

While some studies for example in Kenya, Cote d'Ivoire and Lebanon (Maherali *et al.*, 2021) have demonstrated negative effects on adolescents' SRHR services due to the Covid-19 pandemic, a study conducted in Nigeria reported an increase in adolescent sexual health reproductive services in most of the states during and after lockdown. This was attributed to the amount of importance attached to adolescent services by health facilities (Adelekan *et al.*, 2021). Such importance attached to adolescent health services in the case of Nigeria was not experienced in other countries, as they shifted attention and resources to the fight against the Covid-19 thereby impacting negatively on adolescents' access to sexual reproductive health information and services, consequently leading to poor sexual reproductive health outcomes (Okeke *et al.*, 2022, Baker *et al.*, 2022). The challenges of the Covid-19 pandemic have brought about new possibilities of using technological innovations for health information and service delivery which could also be applied to adolescent sexual health (Nanda *et al.*, 2020). For instance, technological innovations can be seen being used for delivery of health information in the case of WHO entering into an agreement with TikTok, a social media platform to enable frontline workers to share information and experiences about the Covid-19 pandemic (Nanda *et al.*, 2020). According to Nanda *et al.* (2020), such technological innovations could be leveraged upon for adolescent sexual reproductive services and rights information needs.

With the ubiquitous presence of technological innovations such as mobile media, many people are using the Internet for access to information about health to among other reasons; understand some medical conditions, how some diseases/conditions can be treated, understand some symptoms they may be experiencing, and how to lead a healthy lifestyle (Bach and Wenz, 2020). Additionally, "the rise of health applications (apps) on mobile devices such as smartphones and tablets, as well as accompanying health and fitness trackers ("wearables"), make it possible for people to track their health and fitness without the help of medical professionals and at lower costs" (Bach and Wenz, 2020: 2).

Part II 2.2 Mobile Media and Mobile Communication

2.2.1 Definition of Mobile Media

Human beings have been communicating with each other in different ways for as long as humanity has existed, and with the passage of time, human beings have developed ways and methods that facilitate easy accessibility and user-friendly exchange of information through advanced technology (Kuyucu, 2021). The mobile media landscape has been in a state of transformation for many decades, as argued by Frizzera (2015). He posits that there have been big strides made in improving technology in the last few decades which have enabled the introduction of different mobile media devices that facilitate functions such as computing, production, and distribution of information thereby bringing about new ways of interconnectivity and interactivity with the surroundings (Frizzera, 2015). Indeed, over time "information has transformed into media, and media has transformed into mobile media" (Kuyucu, 2021:34). The ubiquitous presence of advanced mobile media globally could not have been possible without the works and successes of inventors and business professionals (Kuyucu, 2021). Indeed, the past decade, the world has experienced mobile media connectivity in many places, and it has become embedded in people's everyday life (Wei, 2013).

2.2.2 Brief History of Mobile Media

Mobile media refers to the use of mobile devices such as smartphones, tablets, and laptops to access and share information through various channels like social media, messaging apps, and websites (Kumar*et al.*, 2018). In health communication, mobile media has been increasingly used to disseminate health information, promote healthy behaviours, and provide access to health services (World Health Organization, 2018).

In this part of the thesis, I shall briefly discuss the history of mobile media within the context of mobile media studies. I will then specifically discuss smartphones as these are a critical aspect of this study. Mobile media is defined as "a personal, interactive, internet enabled, and user controlled portable platform that provides for the exchange of and sharing of personal and non-personal information among users who are interconnected" (Wei, 2013:52). Similarly, mobile media supported communication is communication through a mobile platform that allows for information exchange between interconnected users. The mobile platform also enables users to access the internet due to media convergence (Kuyucu, 2021:37). Mobile media include an array of hand-held devices like mobile phones, tablets, e-readers, game consoles, iPods, Laptops, Personal Digital Assistants [PDAs], digital cameras etc. (Wei, 2013; Fortunati, 2014). Mobile media supported communication makes it possible for people to create and support social networks through 'omnipresent' smartphones (Wei, 2013). From the list of mobile media devices, the most representative and most studied of this list is the mobile phone (Fortunati, 2014), therefore this study focuses more on mobile phones within the broader discussion on mobile media. However, given that mobile phones are a product of a long history of inventions in the area of mobile media, it is important to discuss this history here albeit briefly.

Ancient Egypt is credited with being the birthplace of mobile media as Egyptians substituted stone tablet inscriptions with the Papyrus (Kuyucu, 2021). Similarly, Farman (2012), contended that the papyrus was one of the earliest forms of mobile media, and goes on to define papyrus as "a paper-like medium made-up of thin cuts of the papyrus plant bonded together and used for writing in Egypt as early as the third millennium BC" (Farman, 2012:11). The use of the papyrus for writing in place of stone tablet inscriptions (which was time consuming) made it possible for the writing to be brought to almost the same pace as the speed of thought (Farman, 2012). According to Kuyucu, (2021), the idea of the papyrus allowing for easy transportation of written media is the concept on which Johannes and Gutenbeg invented the printing press in 1440. This printing press was an important development in media distribution since it made possible the printing and supply of newspapers (Kuyucu, 2021). This was a development in mobile media technology because according to Farman (2016:2), "Historically, once a medium, moves from a fixed location (e.g., a message written into the side of monument) to instead being an inscription on a mobile platform (ranging from clay tablets to paper to books), a mobile medium has been introduced into a culture."

A mobile medium has mobility as its main characteristic, hence its ability to traverse geographical spaces (Farman, 2014). Additionally, Farman held that:

> Throughout history-from clay tablets, papyrus, letters, and our current mobile computing devices-mobile media made it so people no longer had to travel to a message; instead, the message came to them. Instead of a message being inscribed onto a static surface such as the side of a building, the message was given through a medium that was mobile by nature, able to be carried to a site unrelated to its place of origin (2014:528).

Following the invention of the printing press, a few centuries passed before the invention of the mechanical telegraph by the Chappe brothers (Kuyucu, 2021). This invention revolutionised the mobile media landscape as it speeded up the transfer of information between people across vast distances and locations (Kuyucu, 2021). The world of mobile media experienced another revolutionary invention as Alexander Graham Bell invented the telephone in 1887 (Kuyucu, 2021).

As mobile media communication developed, the cellular mobile phone was born from efforts of adaptation of a telephone (Goggin, 2009). Furthermore, Goggin (2009), contended that the history of mobile phone covers the large part of the 20th century, and benefitted from technologies of radio, telegraph, reimagining of mobility, and acoustical recrafting of voice telephony for portable instruments.

Cellular phone technology was preceded by analogue radio communications (Kuyucu, 2021) which could only be carried on trains and ships because this early mobile communication technology depended on massive battery power to function and keep people connected (Farman, 2012). With the popularisation of radio communication, the massive battery power needed for the operation of this mobile communication proved to be a limitation in addition to the challenge of overlapping radio frequencies which were unintelligible as people conversed (Farman, 2012). To surmount these challenges, Engineers at Bell Laboratories hatched the concept of "Cellular idea" in 1947, hence the term "cell phone" which aimed at facilitating true mobility and allow for mobile communication on radio telephones free of interference from other callers (Farman, 2012). Later on, "partners of the firm [Bell Laboratories] programmed software that could switch calls, change radio frequencies, turn radios on and off, and connect receivers to the telephone system automatically (Kuyucu, 2021:35)." Before 1973, the mobile media communications inventions

were not Cellular until "John F. Mitchell and Martin Cooper of Motorola demonstrated the first handheld mobile phone using a handset weighing c. 4.4 lbs 92kg" (Kuyucu, 2021:36). With this invention, Cooper is reputed to be the inventor of the modern portable cellular telephone, and was the first to make a phone call using a handheld cellular phone on April 3, 1973 (Kuyucu, 2021). At this stage, mobile media communication was using analogue technology, referred to as first generation [1G] system (Kuyucu, 2021), until the 1990s when the second generation [2G] was introduced (Scolari, Aguado and Feijóo, 2012). According to Goggin (2009), it was in the 1990s that the cell phone became a feature of people's everyday life activities.

In discussing mobile media, Scolari, Aguado and Feijóo argued that:

> The digitalization of communications has gone through two phases. The first one was characterised by the spread of the World Wide Web in the 1990s and the subsequent mutations of different spaces of social life, from economy to education, politics and culture. The second phase started in the 2000s with the transformation of the Web itself—passing from web 1.0 to web 2.0 (2012:29).

The mobile communications landscape, particularly mobile media, reached a new level following the introduction of the iPhone in 2007, and after the arrival of the iPad in 2010 (Scolari, Aguado and Feijóo, 2012). This new level of mobile media communication is explained by Featherstone as he describes the functions of mobile media and how these functions are being applied:

> More and more people are watching Internet pod-casts, video clips and pop-ups and listening to music from their cell phones and other mobile devices. This greater capacity for switching modes, enhanced flexibility and integration means that media are not just more mobile and work outside the office and home: the new media are also more interactive as cheaper multi-functional devices enable greater possibilities for creating, recording, editing, storing and archiving media contents [TV programmes, movies, music, images, textual data] (2009:2).

Before the coming of high-tech multimedia devices, traditional cell phones had one main Function-Voice telephony, however, over decades, cell phones have become more advanced to house complex multimedia facilities to allow for emailing, exchanging of text messages, playing music, reading e-books, listening to the radio, watching television, sending pictures, making video calls

etc. (Scolari, Aguado and Feijóo, 2012). In addition to the multimedia functions, the second-generation mobile media system saw the cell phone diminishing in size and increasing in portability as well as domestic (Goggin, 2009).

The advanced mobile media technology has impacted on people's lives since such technological affordances shape and influence people's social action online and offline because by making it possible for people to be permanently online and permanently connected (Abeele *et al.*, 2018). Today, "we use mobile communication technologies such as smartphones, tablets, and laptops to interact with others, with services and with our device wherever we are and whenever we want" (Abeele *et al.*, 2018:5).

2.2.3 Smartphones

Globally, the use of smartphones has grown exponentially in the last couple of decades (Iyengar *et al.*, 2020, Eleuteri *et al.*, 2018), and that in the USA, adolescent use of smartphones in 2018 was at 73% (Eleuteri *et al.*, 2018). Smartphones are a product of a history of mobile media technological advancements leading to many gadgets being embedded in one single unit (Frizzera, 2015). To situate the history of how we have arrived at smartphone usage, Frizzera, explains:

> We have been using cell phones and playing portable video games since the 1990s; we used to listen to music on a Walkman in the 1980s; take pictures with portable cameras since the nineteenth century; and navigate using a portable compass since the fourteenth century. In the early years of the twenty-first century these gadgets became digital and embedded in one simple device: a smartphone (2015: 30).

A Smartphone is defined as "a newer class of cellular telephone with an integrated computer technology and other features such as an operating system, web browsing, and the ability to run software applications (Iyengar *et al.*, 2020:733)." In a similar way, Abu-Shanab (2015: 1), defines a smartphone as "a cellular telephone with a capability to operate advanced applications and browse the Internet." Additionally, Bhakuus and Polichar (2011), define smartphones as mobile phones that have incorporated many advanced functions like email and Web surfing in addition to the traditional package of voicemail and texting. Smartphones are called 'smart' because they can provide information when you need it just at the touch of your fingers (Iyengar *et al.*, 2020), and also because they have incorporated various functions including those that originally belonged to other devices, for example; personal digital assistants [PDAs], time/alarm clock, Global

Positioning Services [GPS] receiver/navigator, alongside other functions such as camera, video recorders, voice recorders, games, maps and images, and music (Bhakuus and Polichar, 2011). Based on their multiple functions, smartphones have centralised computing into the palm of a person's hand, thereby converging many computing activities into one single unit (Bhakuus and Polichar, 2011). Indeed, "Smartphones serve not only the portable functions of a ''phone'', camera, game and multimedia players, but also thousands of mobile applications(app) with available Internet" (Lin *et al.*, 2014: 1).

Given the multiple functions and capabilities of a smartphone, Boulos *et al.* (2011: 1), posited that "The latest generation of smartphones are increasingly viewed as handheld computers rather than as phones, due to their powerful on-board computing capability, capacious memories, large screens and open operating systems that encourage application development." Abu-Shanab (2015), agrees with the idea of a smartphone being considered a computer, however he adds that smartphones are embedded with a mobile telephone, and enables users to install and run applications. Smartphones possess several features, among them: ease of use, speed, internet connectivity, and the download capabilities (Abu-Shanab, 2015).

According to Abu-Shanab (2015), Smartphones were introduced on the global mobile media communications' technology stage in 1993 by Apple, but it was only in 2007 that the smartphone made a major breakthrough when the iPhone was introduced. Furthermore, it was at the tail end of 2007, that Google unveiled its Android operating system thereby introducing multiple features such as: email, chatting, internet access, audio/video, and social website services (Abu Shanab, 2015). The smartphone has made it possible for users to have "the option of taking entertainment, information resources, email and other computer-based applications with them, in the car, when shopping, in the cafe´ or while waiting for a bus" (Bhakuus and Polichar, 2011: 637).

Smartphones allow for internet access and social website services (Bhakuus and Polichar, 2011), and according to Wang and Liu (2021), many people are accessing the internet using mobile phones compared to Desktops and Laptops. They argue from a Chinese context in 2020, whereby the people who accessed the internet via mobile phones represented 32.8% of the total population of internet users (99.7%), while those accessing internet through desktops and laptops were 28.2% (Wang and Liu, 2021). The reasons for the increase in mobile internet is partly because it is less affected by issues such as demographics, socio-economic status, and technological readiness

(Wang and Liu, 2021) which enable people to use different media platforms including social media platforms. According to Mostafa (2015), social media is defined as the use of web-based applications, among them: YouTube, Facebook, Instagram, Twitter, WhatsApp, Gmail, Yahoo mail, Instagram, Google, to connect with people [Access and] share information, videos, and pictures.

2.2.4 Adolescents and Mobile Media

The world has seen an exponential rise in the use of online media as communication, education, and entertainment are increasingly taking place online (Bozzola *et al.*, 2019). Globally, the most connected age group in terms of access to digital media is that of young people (Hargittai and Walejko, 2008) and they make up the greatest number of users of mobile devices (Ippoliti and L'Engle 2017). According to Radovic and Badawi (2020: 187), "adolescents today can be defined as 'digital natives', meaning they cannot remember a time when technology was not all around them, and therefore they are more adept at using it." However, the categorization of adolescents as digital natives proved to be inaccurate if not problematic since research has demonstrated that no single generation is thoroughly proficient at using technology (Bennett and Maton, 2010). Although the reference to adolescents as digital natives is disputable, what is not disputable is the massive increase of the use of mobile media facilities among adolescents as many are reported to have initial use of social networks around the age of 12 or 13 (Bozzola *et al.*, 2019). Such a surge has arisen from the desire in adolescents to utilise social networking for purposes of constructing social identity as well as for self-expression (Bozzola *et al.*, 2019).

Lately, developments on the web including the domain of other digital media have expanded the possibility of individuals to share their creations and have made it cheap for content to be produced and shared with relative ease with less hassle to pass through gatekeepers (Hargittai and Walejko, 2008). This has seen the growth of usage of social networking platforms such as Facebook which has the highest number of users globally; 2.4 billion, followed by Instagram, and then by Twitter in third position (Bozzola *et al.*, 2019). Arts *et al.* (2021: 1), have argued that "mobile media technologies such as smartphones, wearables and their associated apps, as well as social media- are omnipresent in our-day-to-day activities, both indoors and outdoors." These mobile media technologies and social media have generated a heightened prominence on information exchange, and a construction of a "networking society" which helps the creation of new interactivity between persons, society, and the environment they occupy (Arts *et al.*, 2021). Indeed, the Internet provides

an opportunity for people to grow their social networks beyond physical circumscriptions (Dobransky and Hargittai, 2012). The positive perspective by mobile media's mediation, especially mobile phones for communication, is criticised by some scholars who hold the view that they lack sufficient capacity to facilitate authentic relationships, and do not sufficiently generate authentic supportive networks (Kimm and Boase, 2019). Another criticism has been that mobile media, particularly smart phones have reduced face-to-face interactions and, in a sense, destroyed social interactions (Kimm and Boase, 2019).

In spite of the criticisms by some scholars on the limitations of mobile media, recently, mobile phones have become an intrinsic feature in the lives of adolescents, touching their social, cultural, as well as academic lives (Kimm and Boase, 2019). Indeed, adolescents are usually quick to adopt new digital technological innovations, and generally, they are pacesetters for new norms and practices in the digital space (Kimm and Boase). As opposed to reducing face-to-face interactions, mobile media is seen by some adolescents as enhancing and supporting face-to-face interactions (Radovic and Badawy, 2020).

Given the appreciation of online communication via mobile media as enhancing and supporting face-to-face interactions, some adolescents have been attracted to mobile media to negotiate some health needs and concerns including the management of their healthcare, establishing healthy behaviours, and creating patterns of risk-mitigation as they transition into adulthood (Radovic and Badawy, 2020). In the process of managing their health needs, adolescents share their health experiences online making use of sites such as YouTube, an activity that has demonstrated to benefit the adolescents as this reduces isolation, provides [peer] support, provides a platform for exchanging coping strategies, and works as a space for healthcare learning from the shared experiences (Radovic and Badawy, 2020).

From the above arguments, we can see how adolescent's attraction to online communication has led them to use social media applications such as YouTube and Facebook. It is necessary at this stage to define what social media is as we discuss adolescents and mobile media and show the linkages between social media and mobile media.

2.2.5 Social Media

Social media is defined as "internet-based applications built on technological and ideological foundations of Web 2.0, which enable the creation and exchange of user generated content"

(Smailhodzic and Attema, 2016: 3). Since social media is referred to as "internet based," it is necessary to indicate that the Internet is a technology that enables people's communication and sharing of information from any part of the world [provided internet network is available] via computers, laptops, tablets and smartphones (Sharma and Naik, 2020). Similarly, Zulu and Tembo (2020: 2), submit that the "internet is an electronic network of networks that links people and information through computers and other digital devices allowing person-to-person communication and information retrieval." In the recent past, social media has become an intrinsic part of the internet, and it is enabling people to communicate, share information, and forge relationships of collaboration while engendering a sense of belonging and networking (Sharma and Naik, 2020). Apart from the social media examples mentioned on Facebook and YouTube, other examples are Pinterest, Skype, WhatsApp, Google talk, Mobile messenger, Yahoo messenger, and google messenger (Sharma and Naik, 2020). Today, globally, the most accessed social media on a monthly basis are: Facebook-2.9 billion users, YouTube-2 billion users, and TikTok-1 billion users (Bozzola *et al.*, 2022).

The emergence of social media as a tool of communication and interaction has helped to narrow the communication gap that existed during the pre-social media era since now people are able to easily connect with friends, peers and family (Sharma and Naik, 2020) without necessarily being with them physically. Indeed, "social media technologies collapse multiple audiences into single contexts, making it difficult for people to use the same techniques online that they do to handle multiplicity in face-to-face conversation (Marwick and Boyd, 2010: 114). To emphasise the fact that social media has become an everyday part of many young people's lives, Hodkinson argued that:

> Participation in online cultures of sharing and interaction via social media is becoming increasingly ubiquitous and arguably, compulsory among groups of young people in late capitalist societies. And particularly as a result of the evolution and diffusion of mobile multimedia technologies, such participation takes on an increasingly 'always-on' character, whereby users' connection with others via such platforms forms a constant feature of everyday lives that traverse a range of physical settings (2017: 272)

Recent statistics have demonstrated that the use of social media globally points to a positive picture for both information seeking and social interaction. According to O'Neil (2019), 88% of Web users globally, use social media for social interaction, and 80% use it for information seeking. With such statistics, one can conclude that in the recent past, social media has revolutionised communication, and this revolution is particularly more among young people and adolescents whose use of this innovation is on the increase (Plaisime *et al.*, 2020). In some countries, for example; Italy, the use of social media among adolescents increased exponentially during the Covid-19 pandemic as many young people accessed the internet via smartphones as these mobile media became a tool for education and learning (Bozzola *et al.*, 2022). As the use of the internet and social networking sites increased among adolescents and young people, their levels of interactivity online increased, and this may significantly impact on their self-esteem and wellbeing (Bozzola *et al.*, 2022). The increased exposure to internet use and social media, while having positives such as fostering communication, consultation on different issues such as education, establishing relationships, and sustaining contacts with different people (peers, friends, family), online interaction is not without risks as it can potentially expose young people and adolescents to negative experiences such as cyber-bullying, sexual risky-behaviours or violence (Bozzola *et al.*, 2022). According to Zulu and Tembo (2020), the risks posed to adolescents by exposure to internet and social media are:

> categorised into: internet technology risks; Content risks- illegal activities, harmful content, harmful advice; Contact risks- cyberbullying, online harassment, content sharing, online dating; Commercial related risks- online marketing, age restricted products, online scams; and Information privacy and Security related risks- revelation of personal data, identity theft, sharing passwords (2020: 1)

The exposure to online abuse and harassment could be down to the fact that the internet is an unregulated space which lacks gatekeepers to control the sharing or circulation of content among users who interact with each other online (Salter, 2018). According to Salter (2018), although there has been an acknowledgment of online abuse and harassment by social media companies and the police, for example in the USA, not much has been done to curb it since they take a stance that refers to online abuse and harassment as the "cost of being online." To be fair to the police and

social media companies, they have paid significant attention to online sexual abuse of minors, while neglecting online abuse of adult women has been overlooked, notwithstanding the harm they suffer (Salter, 2018).

As adolescents and young people participate in online interactions, they are exposed to other risks besides harassment and online abuse, and some of such risks such as being watched while typing or having people copy and post comments or pictures to a different audience which were meant for a totally different audience (Hodkinson, 2017). The content which may be copied and pasted and sent to audiences rather than the one originally intended could end up in the hands of groups of people that may include teachers, parents, potential employers, college admission panels, among many other groups (Hodkinson, 2017). Exposure to such risks can be harmful to the image of the young person and may affect their prospects in college or employment since online media platforms are a collapsed context in which even educators and employers are also present (Duffy and Chan, 2019; Hodkinson, 2017). As part of the screening process for would-be employees and students, some employers and educators make use of applicant's personal social media accounts to assess the suitability of the candidate, thanks to the permanence and spreadability of online content (Duffy and Chan, 2019; Hodkinson, 2017). Realities of this nature bring to the fore the fact that the privacy which young people desire to safe-guard is not guaranteed as is argued by Hodkinson (2017) that social media's affordances present young people with challenges to safeguard their privacy since it possesses the capacity for easily retrieving and reproducing content and spread it to large and unlimited audiences.

Social media and smartphones have been used by young people and adolescents for activities beyond just social interactions as can be seen in Italy where they were used as education tools for learning and dissemination of educational information during Covid-19 lockdowns (Bozzola *et al.*, 2022), and as tools for accessing health information in Iran (Jalilian *et al.*, 2022). According to Jalilian *et al.* (2021), in a study done in Iran, social media is the largest source of health information for young people, however, young people demonstrated low levels of e-health literacy [knowledge], which can potentially expose them to inaccurate information. The understanding of e-health literature can be aided by first grasping the definition of health literacy. According to Norman and Skinner (2017: 2), health literacy is defined as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed

to make appropriate health decisions." Similarly, Busse *et al.* (2022:1) define health literacy as the possession of "skills, knowledge and resources to search for, find, understand, evaluate and apply health information is defined as health literacy (HL)." From such an understanding, "eHealth literacy is defined as the ability to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem (Norman and Skinner, 2017:2). Put differently, e-health literacy is the skill to choose, assess, and use good quality information from the internet (Holch and Marwood, 2020).

The possession of adequate e-health literacy equips people not to be affected by misconceptions and enables them not to participate in sharing misinformation on social media (Jalilian *et al.*, 2021). It must be pointed out that young people who are the majority internet users do not possess adequate e-health literacy to obtain [accurate] health information, and therefore it is imperative to improve their e-health knowledge levels alongside that of the public in general (Jalilian *et al.*, 2021). The possession of e-health knowledge entails "basic reading and writing skills, working knowledge of computers, a basic understanding of science, and an appreciation of the social context that mediates how online health information is produced, transmitted, and received" (Norman and Skinner, 2017: 2).

Mobile phones especially smartphones have also been incorporated in the practice of m-Health, a practice that uses mobile communication devices to provide health-care services (Merrell and Doarn, 2014). According to Sadiku *et al.* (2017: 450), "Mobile health is a creative use of emerging mobile devices to deliver and improve health practices. It integrates mobile technology with the health delivery with the premise of promoting a better health and improving efficiency." The dawn of smartphone technology has seen tremendous growth in the use of m-Health services (Merrell and Doarn, 2014). According to Merrell and Doarn (2014), some of the areas in which m-Health is being applied is personal, and social, with the former aimed at empowering the individual patient through the internet on their mobile phone by seeking medical advice, while the latter is the sharing of one's health concerns with non-professional colleagues especially done via social media like Facebook.

M-health also uses other mobile devices apart from smartphones in cases of home-care patients who need monitoring through data capture and examination, for example patients with chronic conditions such as dementia, congestive heart failure, or those who are asthmatic (Sadiku *et al.*,

2017; Merrell and Doarn, 2014). During the Covid-19 pandemic, smartphone applications were developed within m-Health technologies for purposes of contact tracing, symptom detection, and early diagnostics (Istepanian, 2022). While the use of smartphones in m-Health has been embraced for its benefits and hailed as good technology according to the argument of Merrell and Doarn (2014), this technology still has some challenges, for example: patient acceptability, privacy and security, and global outreach (Istepanian, 2022). Istepanian (2020) argues that the developing world has not really experienced the benefits m-Health technology:

> although the proliferation of smart phones and usage of mobile technologies is extensive in these countries, the much-hyped benefits of these m-Health systems and their market-driven applications aimed to address the many healthcare challenges in the world's poorest regions, such as improvement in health inequality, literacy, bridging the care gaps and many other challenges, remain largely modest and unattainable (2020: 2).

The use of online platforms for health information elicits different feelings from different people given that social networking platforms are viewed with positivity by some, while others view them negatively; for example, O'Neil (2019), argues that some social networking sites have potential to generate misunderstandings, and abuse even when used to communicate health information. Other risks of mobile media technology usage apart from inequities in digital access would be a reproduction of differentiations and prejudices online, increase in the possibilities of harm and cybercrimes for vulnerable groups like adolescents (Nanda *et al.*, 2020).

2.2.6 Adolescent Girls' Access to SRHR Information Through Mobile Media at Global Level

Tamara *et al.* (2018) conducted a study titled "Mobile Phone Use and Access to Sexual and Reproductive Health Information Among Young People in Indonesia." It was a cross-sectional survey conducted among 1,234 young people aged 15-24 years. Participants were recruited from schools, community centres, and online platforms. Data were collected through a self-administered questionnaire that assessed mobile phone use, access to SRHR information, and demographic characteristics. The questionnaire included questions on: Mobile phone ownership and internet use, frequency and purpose of mobile phone use- Sources of SRHR information, topics of interest

in SRHR, perceived accuracy and reliability of online SRHR information, preferred platforms for accessing SRHR information (mobile apps, social media, websites)

According to the study (Tamara *et al.*, 2018), in Indonesia, a country with approximately 60 million people aged 15-24 years, young people face challenges in accessing accurate and reliable information on SRHR. Many young people lack access to comprehensive sexuality education, and healthcare services often have limited hours and locations, making it difficult for young people to access SRHR information and services (Tamara *et al*., 2018). She argues that Mobile phones have the potential to bridge this gap, as they are widely used among young people in Indonesia.

The findings revealed that mobile phone ownership was high, with 95% of participants owning a mobile phone. Among these, with 75% used their phones to access the internet, the majority of participants (60%) used their phones to search for SRHR information, the most common topics being contraception (45%), sexually transmitted infections (40%), and pregnancy (35%), participants who used mobile phones to access SRHR information were more likely to have accurate knowledge about contraception and HIV/AIDS , however, 40% of participants reported encountering inaccurate or unreliable SRHR information online, the majority of participants (70%) preferred to access SRHR information through mobile apps, followed by social media (20%) and websites (10%), participants who used mobile apps to access SRHR information were more likely to have accurate knowledge about contraception and HIV/AIDS (Tamara *et al.*, 2018).

The study (Tamara et al., 2018) highlighted the potential of mobile phones in increasing access to SRHR information among young people in Indonesia, the findings suggest that mobile phones can be an effective platform for disseminating accurate SRHR information, particularly among young people who may face barriers in accessing healthcare services, but the study also raises concerns about the accuracy and reliability of online SRHR information, emphasizing the need for quality control and regulation of online content. The preference for mobile apps over other platforms suggests that apps may be a more engaging and user-friendly way to access SRHR information.

The study (Tamara *et al.*, 2018) also concluded that mobile phones are a promising platform for increasing access to SRHR information among young people in Indonesia, efforts are needed to ensure the accuracy and reliability of online SRHR information and to address the digital divide in access to mobile technology, the development of mobile apps and other digital platforms may

be a useful strategy in improving access to SRHR information and services among young people in Indonesia.

Systematic reviews that explore the use of digital media have been conducted but largely in European contexts including studies by Guse *et al.* (2012) and Wadham *et al.* (2019). Additionally, in a systematic review protocol by Feroz *et al.* (2019), the focus was primarily on only adolescents' use and engagement in mHealth interventions. These reviews are relatively limited in capturing the experiences of adolescents in the African settings (Guse, *et al.*, 2012; Wadham *et al.*, 2019; Feroz *et al.*, 2019).

New digital media—for example, text messaging, Rich Site Summary feeds, and Web-based platforms, including social networking sites (SNS), shareable video sites, and wikis—have dramatically changed communication for people worldwide. These changes are particularly apparent for youth, both in the United States and abroad. Most Internet pages are published in English[1] and are accessed by users all over the world. In 2008, those aged 10 –19 years accounted for the highest percentage (35%) of China's 298 million Internet users, followed by those aged 20 –29 years at 32% (Twenty-Third Statistical Survey Report, 2009). In the United States, 93% of adolescents use the Internet, accessing the Web via personal and public computers, as well as mobile phones. Seventy-five percent of U.S. adolescents own a personal mobile phone (Lenhart *et al.*, 2010).

This increase in the variety of communication tools may provide an important opportunity for health education and health promotion in general and sexuality education in particular. The Internet and other forms of digital media have afforded opportunities for the breakdown of geographic boundaries in sexuality education. New digital media can be disseminated widely throughout the world, customized for communities and populations, and used privately, thus giving opportunities for self-directed learning. Indeed, many sexuality education programs have used Web sites, SNS, and text messaging to educate youth (Lim *et al.*, 2008).

[1] http://www.internetworldstats.com/stats7.htm

2.2.7 Mobile media in the Zambian Context/ Developing Countries/African Context

In the developing world, more than 87% of the people use mobile phones, and globally, above 93% of the population is connected to mobile phone networks (Lupton and Willis, 2021). The increase in the usage of mobile phones has been due to decreasing mobile phone costs and increasing reliance on mobile phones as essential commodities. This phenomenon is the case in both the developed and the developing world (Ippoliti and L'Engle 2017). In South Africa, only 6% of youth report daily Internet use, but 72% own mobile phones and 59% report using them daily (Young, 2007). As more youth are "wired," new digital media may provide a means of communicating with youth who have hitherto had poor access to electronic information (Young, 2007).

In spite of the rising global trends in the use of the internet, many Zambians do not have access to the internet as revealed in the 2020 Afrobarometer survey which showed that 56% of Zambians never had access to the internet (Lynch and Gadjanovaa, 2022). According to Lynch and Gadjanovaa (2020), percentages of non-internet access vary depending on characteristics such as age and location; for example, those aged 60 and above were at 63%, while those aged 18-25 were at 46%, for rural areas it was 74% while for urban areas it was at 35%.

In Zambia, according to Banda and Tembo (2016), a survey conducted by Zambia Information Communications Telecommunications Authority [ZICTA], the Central Statistics Office [CSO], and the Ministry of Transport and Communications, 51% of individuals above 10 years old are active users of mobile phones, while 64% of households countrywide have access to mobile phones. In 2015, Zambia had about 10.1 million people subscribing to mobile services, and by September of the same year, the number of mobile phone subscribers rose to 10.9 million, representing an estimated mobile penetration rate of 70% in the whole country (Banda and Tembo, 2016).

Among African countries, Zambia was the fifth country in 1994 to have full access to the internet and was the first in Sub-Saharan Africa except for South Africa (Mambwe, 2015:204). The provision of the Internet at this stage was done by UNZANET, a facility hosted by the University of Zambia [UNZA] (Mambwe, 2015: 204). Mambwe (2015: 204) adds that the facility initially provided internet services to schools and departments of UNZA, but quickly expanded to include

Non-Governmental Organisations, health institutions, and aid or development agencies. With the expansion of internet service provision, there was a need for policy to govern Zambia's goal of becoming an information and knowledge-based society, which policy was instituted in March 2007, and is called Information Communications Technology [ICT] policy (Mambwe, 2015: 206).

In 2009, the Zambian Parliament passed the Information Communications and Technology Act [ICT] Act, intended to "provide for the regulation of information and communication technology; facilitate access to information and communication technologies; protect the rights and interests of service providers and consumers." Commenting on this ICT Act of 2009, Mambwe (2015: 207) postulated that "the Act provides for the regulation of the Information and Communication Technology sector as well as provides mechanisms of facilitating access to Information and Communication Technologies by all Zambians."

According to a 2018 survey (ZICTA, 2018), Zambian households were replacing traditional ICT devices (fixed telephone lines, radio and television) to mobile phones and computers. Furthermore, the survey revealed an increase in access to mobile network coverage and internet access by many households. There was also an increase to internet services by households from 12.7% in 2012 to 17.7% in 2018 (ZICTA, 2018). On mobile phones, the survey revealed a significant increase in mobile phone ownership among Zambians as well as an increase in smartphone use among mobile phone users from 13.5% in 2015 to 29% in 2018. Although Zambia has seen an increase in the ownership of mobile phones among its citizens, not many of these mobile phones can connect to the internet as pointed out by Lynch and Gadjanovaa (2022) who argue that in 2020, 77.5% of Zambians owned mobile phones, only 36.8% of these devices could connect to the internet. Notwithstanding this situation, the usage of internet in Zambia is higher than smartphone ownership because some people who do not own a smartphone still access the internet through borrowing smartphones from those who have (Lynch and Gadjanovaa, 2022). Viewed from the global perspective, Zambia's internet penetration and user rates are far from impressively compared to 59.5% internet penetration rate and 45% of social media users world-wide as of January 2021 (Lynch and Gadjanovaa, 2022).

Just like the majority of the people globally, Zambians use mobile phones for their social media activities, although they face a myriad of challenges in their quest to access the internet and stay online because some of them do not have personal devices, and to depend on other people who

have, and are willing to allow them to use their devices (Lynch and Gadjanovaa, 2022). Other challenges that Zambians that limit their access to the internet are poor network, cost of data, and erratic electricity supply or load shedding (Lynch and Gadjanovaa, 2022).

While access to the internet and use of social is hailed as a positive development, it is not without its own fair share of risks especially to children who in the Zambian context and in line with the Commission for the Rights of Children [CRC] are considered to be below the age of 18 (Zulu and Tembo, 2020). The age group of below 18 years (as argued in Chapter One) are mainly still going to school and made up most participants in this study. Going by this reality, this category of Zambian citizens is exposed to a plethora of internet and social media risks which include but are not limited to cyberbullying, paedophilia, child pornography, sexting and Satanism (Zulu and Tembo, 2020).

2.2.8 Mobile Media Improving Young People's Sexual and Reproductive Health in Low and Middle-Income Countries

There are gendered inequalities around mobile ownership and internet access in LMICs, however, adolescent girls and young women are increasingly gaining access to internet-enabled phones. Mobile health interventions are also becoming more common worldwide (Milena Soriano Marcolino *et al.*, 2018). Evidence suggests young people are responsive and enthusiastic to digital solutions related to health (Feroz, Abrejo, and Ali *et al.*, 2019:117). Digital solutions have the potential to tackle some of the key barriers adolescents in LMICs face when seeking SRHR information and services, including provider bias, stigmatization and discrimination, lack of privacy, embarrassment, and high cost of services and transportation (Feroz, Abrejo, and Ali *et al.*, 2019: 117; Jones, Williams, Sipsma, and Patil, 2019). Merging technology and SRHR can encourage an open dialogue about taboo topics in the wider community, increase self-efficacy of young people, and engage mass audiences in a cost-effective and meaningful manner. Currently, there are a variety of digital solutions to address specific SRHR topics, including stigma and SRHR knowledge, fertility and contraception, sexual violence, youth-friendly health services, and others.[2] However, these technologies must be rigorously tested and designed with a human-centred approach for them to be effective.

[2] ERT Initiative," Youth+Tech+Health, 2019. https://yth.org/#/ projects

There is some evidence that digital solutions can reach young people directly and achieve knowledge and behaviour change around SRHR (Guse, Levine, and Martins *et al.*, 2012: 535; Nicole, Ippoliti and L'Engle, 2017: 11). For example, a systematic review of 99 studies presenting data on digital HIV/STI initiatives found that both mobile health-based interventions (text and phone calls) and internet-based mobile interventions improved antiretroviral therapy adherence, clinic attendance rates, and, in some cases, self-care (Daher, *et al.*, 1996: 2017) However, the evidence for the effectiveness of most digital health initiatives, including those covering broader SRHR topics, is limited (Marcolino, *et al.*, 2018) Most studies have been performed in high-income countries, such as the United States of America, and those in LMICs focus more heavily on the impact of text messaging and phone calls rather than internet-based solutions to deliver SRHR information (Marcolino *et al.*, 2018; Guse *et al.*., 2012: 535)

Efforts to capture young people's needs and experiences using SRHR products and services and their opinions on how best to access such information are also lacking. Some data on how young people use technology to learn, communicate, and discuss SRHR have been collected in the United States in 2011 and in Bangladesh in 2019 (Boyar, Levine and Zensius, 2011; Das, 2017). The United Nations Educational, Scientific and Cultural Organization's 2020 initiative, "Switched On," also aims to understand how sexuality education and information are being delivered in digital spaces, as well as who is accessing them and how (Switched On: Sexuality Education in the Digital Space," Category 8-Symposium, UNESCO, 2020). To harness the power of digital spaces to improve young people's SRHR, a deeper understanding of their internet use, the role of data privacy, and why many online SRHR solutions are not used is needed (Feroz, *et al.*, 2019: 117).

Given that many young people in LMICs have special SRH education needs that remain unmet, and responding to these needs, the application of innovative and new approaches is needed to ensure access to harmless, efficacious, inexpensive, admissible SRH [information] services (Feroz *et al.*, 2021). According to Girl Effect (2020) study, recommendations are that there should be accurate and comprehensive SRHR information online, across varied digital platforms, and note when information is scientifically valid or medically verified, link online SRHR information to appropriate youth-friendly medical and community services to raise awareness of trustworthy digital platforms and encourage follow-up with services, Meaningfully engage youth in the design

of digital SRHR resources and testing of online SRHR platforms to make them accessible and youth-friendly and encourage their use, Provide digital literacy education and increase opportunities to privately access internet-enabled devices.

A systematic review of 30 studies on mobile health (mHealth) interventions for adolescent girls' SRHR found that mobile media can increase knowledge, improve attitudes, and enhance uptake of SRH services (Agarwal *et al.*, 2020). Another global survey of 2,000 adolescent girls aged 15-19 found that 80% used mobile phones, and 60% accessed SRHR information through mobile media (Girl Effect, 2020).

The United Nations Population Fund (UNFPA) reported that mobile media can reach marginalized adolescent girls with SRHR information and services, improving their access to contraception and reducing teenage pregnancy (UNFPA, 2020). A review of 20 mHealth programs in low- and middle-income countries found that mobile media can improve adolescent girls' access to SRHR information, counselling, and services, including contraception and HIV testing (MCHIP, 2020).

Studies have also explored the potential of mobile media to address specific SRHR issues, such as menstrual health management (MHM). A global review of 15 studies on mobile-based MHM interventions found that mobile media can improve adolescent girls' knowledge and practices related to menstruation (Murphy *et al.*, 2020). While mobile media offers promise for improving adolescent girls' access to SRHR, challenges persist. A global survey of 1,500 adolescent girls found that concerns about privacy and security hindered their access to SRHR information and services through mobile media (Chandra-Mouli *et al.*, 2020).

In most LMICs, young people (adolescents and youth), aged 10–24 years, have very limited, or no access to sexual and reproductive health (SRH) education and services. This is largely due to lack of awareness, social stigma, policies, and procedures inhibiting the provision of contraception and abortion services to girls, and judgmental attitudes of healthcare professionals (Williamson, 2013 and Singh *et al.*, 2003). Thus, young people have special SRHR education needs that remain unmet, and to address these specific SRHR needs, the use of innovative and novel approaches are required to ensure access to safe, effective, affordable, and acceptable SRHR services (Singh *et al.*, 2003). One of these innovative ways is mHealth which involves the use of mobile technologies and multimedia tools to accomplish health goals and support healthcare delivery (Nurmi, 2013: 24).

Many LMICs have attained a substantial level of cell phone penetration (over 90%) in recent years (Feroz, 2017: 704; UCL, 2015: 6). Because of the rapid expansion of cell phone ownership and mobile phone penetration in LMICs, the novel field of mHealth has gained much progress and it is being used rapidly in hundreds of diverse health-related projects (Nurmi, 2013). The high mobile phone penetration has led to increase usage of mobile phones, especially amongst younger population in LMICs [Peña-López, 2014: 7 and Hightow-Weidman *et al.*, 2015).

Young people are responsive and enthusiastic to use new innovative technologies such as mHealth to address barriers to receiving SRHR information and services (Cornelius *et al.*, 2012; Perry *et al.*, 2012, and Wike and Oates, 2014). The mHealth technology can help overcome most of the barriers including but not limited to: provider prejudice, stigmatization, discrimination, fear of refusal, lack of privacy and confidentiality, an embarrassment in seeking SRHR education and services on highly sensitive topics, cost prohibitions, and transportation challenges, by providing safe, accurate, cost-effective, timely and tailored SRHR information and services to young people (Biddlecom, Singh and Munthali, 2007). More importantly, mHealth offers privacy, convenience and easy access in contrast to face-face consultations with healthcare professionals, which eventually addresses the barriers of stigmatization and embarrassment in receiving tailored SRHR information services (Delany-Moretlwe *et al.*., 2015). Worldwide, diverse mHealth solutions have been used to connect the young population to SRHR information and services (Burns, Keating and Free, 2016). Similarly, mHealth technology can be used in LMICs to reach out to youth populations and to engage them to provide acceptable, safe, cost-effective and accurate SRHR services (Biddlecom, Singh and Munthali, 2007; Kennedy *et al.*., 2013: 13).

To tap into the potential of mHealth for adolescent and young people's SRHR information and services, there has been an increase in the amount of research in high-income countries (HIC) in recent years (L'Engle *et al.*, 2016; Ippoliti and L'Engle, 2017: 11). However, there is little evidence on the use of mHealth interventions for improving SRHR information and services for young people and adolescents in LMICs (L'Engle *et al.*, 2016: 3; Ippoliti and L'Engle, 2017: 11).

A systematic review by L'Engle and colleagues assessed strategies on using mHealth to improve young people's SRHR by using the mHealth Evidence Reporting and Assessment (mERA) checklist; although only three out of the 35 articles included in the review were related to LMICs, the small number of articles reflected the lack of literature from LMICs (L'Engle *et al.*, 2016: 3).

Another review by Ippoliti and L'Engle summarized 17 projects which involved mHealth interventions to improve young people SRHR in LMICs, through the global call for information. Both reviews included evidence regarding the use of mHealth for improving young people's access to SRHR. However, little is known regarding the potential barriers and facilitators for the uptake of mobile phone interventions for improving young people's SRHR in LMIC's.

Three studies reported use of mobile phone interventions such as m4RH, text-based system, for improving access to family planning information. A qualitative study conducted at Dar es Salaam, Tanzania, and Nairobi, Kenya, obtained feedback on the feasibility of the m4RH project (L'Engle and Vadhat, 2009). The m4RH project is theorized as an automated, text-based system that is compatible with all mobile phones to improve access to family planning (FP) information via mobile phone. This study concluded that providing FP information via text message is a favourable method of reaching women and men with health information (L'Engle and Vadhat, 2009). Another observational study was conducted to evaluate the feasibility of providing automated FP information via mobile phones m4RH to the public in Tanzania. The study found out that 2870 unique users accessed m4RH in Tanzania, resulting in 4813 questions about contraceptive methods. A variety of changes in FP use were stated after using m4RH, with reported changes consistent with where the users are in their respective reproductive cycle. In Kenya, young people's use of m4RH was examined through a mixed methods study. The study revealed that condom and natural FP information was retrieved most frequently, although users queried all FP methods. Overall, participants mentioned improved contraceptive knowledge and use after using m4RH (Vahdat *et al.*, 2013: 123).

Some studies examined the usage of mobile phones among adolescents on their unmet need for SRHR information and services particularly in LMICs. A qualitative study conducted in six Nigerian states, studied adolescent girls and young women's reach and use of mobile phones to seek SRHR information and services The study concluded that there is high mobile phone access yet limited use of phones to access SRHR information and services (Akinfaderin-Agarau *et al.*, 2012: 219–30). In India, a cross-sectional survey was conducted to study the level and pattern of mobile phone usage among adolescent girls. The study informed that most adolescent girls spent 2–4 hours a day on an average using smartphones and 69% adolescents preferred SMS for awareness about reproductive and sexual health information (Singh and Jain, 2017: 3861–4).

Another study was conducted in India to determine the association between exposure to social media and SRH knowledge among girls. This study revealed that exposure to social media has an influence on adolescent girls gaining SRH knowledge, but this is mostly among the wealthy, and those living in urban areas (Saha *et al.*, 2022). The study proposes that digital interventions should include the social cultural contexts to reap full benefits of social media in aiding SRH knowledge among adolescent girls (Saha *et al.*, 2022) who bear the greatest brunt of SRHR outcomes (Macharia *et al.*, 2021). In Kenya, a study was conducted to explore the sources of information for SRH information among adolescents and to determine if mobile phone technologies were a solution. The study revealed that mobile phone apps had potential to provide easily accessible user-friendly platforms to enhance awareness and offer SRH information in a confidential manner (Macharia *et al.*, 2021). All these studies are examples of how digital media has significantly changed the communication landscape and offers great potential for adolescent girls to access SRHR information, and improve their health outcomes (Macharia *et al.*, 2021). This potential can be leveraged upon by people especially in LMICs to improve the lives of adolescent girls who are often living in environments that have culturally and socially restrictive norms, beliefs and practices, resulting "in insufficient and inadequate parent-adolescent communication which majorly restricts girls from gaining and developing SRH knowledge from parents and immediate household members (Saha *et al.*, 2022).

2.2.9 Mobile Health (Mhealth) Interventions for Adolescent Sexual and Reproductive Health Information in Zambia

Mukiya *et al.* (2020) conducted a qualitative study in Zambia to explore the feasibility and acceptability of a mobile health (mHealth) intervention for adolescent SRHR information. The study revealed that adolescents and healthcare providers were receptive to the use of mobile phones for SRHR information and support, but cultural norms and social relationships significantly influence their mobile phone practices. The authors found that cultural values such as respect for authority and modesty shape adolescents' mobile phone use, which can hinder their ability to access SRHR information. Moreover, social relationships with family, friends, and healthcare providers play a crucial role in shaping adolescents' mobile phone practices and SRHR information-seeking behaviours. The study highlights the importance of considering cultural and social factors in designing effective mHealth interventions that meet the SRHR needs of adolescents in Zambia.

The study highlights the need for further research to address the cultural and social determinants of SRHR outcomes among adolescents in Zambia, and to develop mHealth interventions that are tailored to the specific needs and contexts of this population. The study reveals that cultural norms and social relationships significantly influence adolescents' mobile phone practices and SRHR information-seeking behaviours, and therefore, mHealth interventions must be designed to consider these cultural and social factors to be effective. Furthermore, the study suggests that involving family, friends, and healthcare providers in mHealth interventions may be crucial in leveraging social relationships and improving SRHR outcomes among adolescents in Zambia. Overall, the study underscores the importance of culturally sensitive and socially informed mHealth interventions that address the unique needs and contexts of adolescents in Zambia.

Conclusion

This chapter has reviewed literature on adolescent sexual reproductive health and rights information and mobile media. The first section looked at sexual reproductive health and rights from a global perspective while concentrating mainly on Africa and Zambia. The second section focused on literature dealing with mobile media.

The concentration on Africa and Zambia was informed by the revelation of how this continent continues to be heavily affected by health challenges regarding teenage pregnancies, early marriages, sexually transmitted infections including HIV/AIDS. Additionally, these health challenges are exacerbated by cultural and traditional barriers to sexual reproductive health information and services. Another reason for focusing more on Africa generally, and Zambia in particular is that Africa holds the highest number of youths globally, while the population of Zambia has more young people than adults. The review of literature on the sexual reproductive health in Africa has revealed a gap in terms of access to sexual reproductive health information and services resulting in many health complications among adolescents and young people.

The second section of literature review focused on mobile media. This section looked at literature on mobile media. It traced the history of mobile media from its early beginnings to smartphones, and the proliferation of social media. This section revealed that adolescents are avid users of mobile media, particularly smartphones which they use to access social media platforms. Furthermore, this section highlighted the boom in mobile technology use globally while focusing

on the growing usage of this technology in both Africa and Zambia. Africa and Zambia, which are both boasting of a highly youthful population, have experienced a significant growth in both the ownership and usage of mobile phones generally, and smartphones, and an increased access to online media platforms via smartphones.

Literature from outside of Africa, especially from the USA and Europe has demonstrated how useful mobile media technology is for people who seek for health information online, and how this media has been leveraged upon to help adolescents in establishing health behaviours as they transition into adulthood. Such literature is there in the African continent, albeit in insignificant levels. The literature reviewed on Africa seems to lack engagement with African traditional epistemologies on how adolescents gain knowledge about sexual reproductive health, apart from mentioning that families and friends are also sources of such information.

In the domain of social media, again the dominant population using this media are adolescents across the globe. With the dawn of Covid-19 whose protocols also meant social-distancing and isolation (as need arose), the use of social media via smartphones increased as people sought to stay connected with friends, family, as well as to receive and share information about their health among other things.

In summary, this literature review highlights the significance of mobile media in expanding adolescent girls' access to SRHR information, support, and services. While notable progress has been made, challenges persist, including inaccurate information, gender disparities in mobile access, and concerns about privacy and safety. The review underscores the need for tailored interventions, inclusive design, and collaborative efforts to harness the potential of mobile media in promoting the SRHR and well-being of adolescent girls.

This chapter has revealed the challenges of the digital divide as well as digital literacy, both of which must be surmounted if mobile media is to be fully utilised as a tool for the searching, acquisition and sharing of sexual reproductive health information among adolescents particularly in Africa and Zambia. Another lacuna is a critique of mobile Media, especially social media. I did not find literature that deliberately deals with educational systems in Africa or Zambia that are focused on empowering adolescents with the tools for critical thinking to enable them to discern what they are ingesting via social media.

CHAPTER THREE

3.0 THEORETICAL FRAMEWORK

3.1 Introduction

According to Grant and Osanloo (2020), a theoretical framework is the foundation from which all knowledge is constructed (metaphorically and literally) for a research study. It works as the structure and support for the rationale of the study, the problem statement, the purpose, the significance, and the research questions. The theoretical framework gives a grounding base, or an anchor, to the literature review, and most importantly, the methods and analysis (Grant and Osanloo, 2014: 12).

This chapter outlines the theoretical framework that guides my investigation into adolescent girls' access to SRHR information through mobile media during the Covid-19 pandemic. I draw on two key theories: Participatory Culture Theory and Self-Determination Theory. These theories provide a nuanced understanding of how adolescent girls engage with mobile media, construct their identities and meanings, and develop the motivation and agency to access SRHR information. By integrating these theories, the chapter offers a comprehensive framework for understanding the complex interplay between mobile media, SRHR information, and adolescent girls' empowerment during the Covid-19 pandemic.

3.2 Participatory culture theory

From the onset, it is important to allay the confusion that might arise in the understanding of participatory culture as distinguished from participatory research. Participatory culture is distinguished from participatory research approaches in that the former describes the cultural production and social interactions of fan communities (Jenkins, 2006), while the latter refers to the involvement of local people as key participants in research and planning, focusing on locally identified and defined priorities and perspectives thereby emphasising a ‘bottom up’ approach to research (Cornwall and Jewkes, 1995).

It was in 1992, that the term “participatory culture” first appeared in the work of Henry Jenkins titled *Textual Poachers: Television Fans and Participatory Culture.* This term was devised to describe the cultural production and social interactions of fan communities (Jenkins, 2006). In *Textual Poachers,* Jenkins referred to fans whom he distinguished from mere spectators (Jenkins, 1992). According to Jenkins (2012 :3), participatory culture is defined as a culture that has

characteristics such as : a) relatively low barriers to artistic expression and civic engagement, b) strong support for creating and sharing one's creations with others, c) some type of informal mentorship whereby what is known is passed along to novices, d) members believe that their contributions matter, e) members feel some degree of connection with one another, at the least they care about what other people think.

Fuchs (2014) sees participatory culture as often known for the involvement of users, audiences, consumers and fans in creating culture and content. Some of the examples of such involvement in the creation of culture include: "joint editing of an article in Wikipedia, the uploading of images on Flickr or Facebook, the uploading of videos to YouTube, and the creating of short messages on Twitter or Weibo" (Fuchs, 2014: 52).

My picking of participatory culture as a theory to inform this study is based on its significance to mobile media communication which is part of the focus of this study. The discussion of participatory culture in the context of this study is situated in the context of the development of the "active audience" paradigm in cultural studies. The "active audience" paradigm traces its roots to Stuart Hall (Aligwe *et al.*, 2018).

Stuart Hall, a renowned cultural studies scholar, says that participatory culture is marked by a shift from the traditional "encoding/decoding" model, that involved producers encoding messages and audiences decoding them, to a bubbling and interactive model, where audiences are actively involved in the production and circulation of meaning (Hall, 1980). The argument in participatory culture stresses that audiences are not passive recipients of media messages, but that they actively contribute to shaping the meaning and impact of media texts (Hall, 1980: 132). This approach challenges the traditional "encoding/decoding" model, where producers encode messages and audiences decode them in a straightforward manner (Hall, 1980:128). Encoding is the "analysis of the social and political context in which content is produced, while decoding is the consumption of the media content" (Krop, 2015: 12).

Hall argues that the encoding/decoding process is a very complex process as audiences take part in actively negotiating and contesting meanings through the lenses of their own cultural backgrounds, experiences, and social contexts (Hall, 1980: 130). He gives three possible decoding positions as follows:

a) Dominant-hegemonic decoding: audiences accept the preferred meaning encoded by the producer (Hall, 1980: 131);
b) b) Negotiated decoding: audiences partially accept and partially resist the preferred meaning (Hall, 1980: 132);
c) c). Oppositional decoding: audiences reject the preferred meaning and create their own alternative interpretations (Hall, 1980: 133).

For Hall, what is critical is the importance of understanding how power relations play a significant role in shaping the encoding and decoding process, and how audiences can both resist and conform to dominant ideologies through their participation in media culture (Hall, 1980: 135).

Taking the context of mobile media and social media, participatory culture theory highlights the ways in which users engage with and shape media content, often blurring the lines between producers and consumers. Hall's participatory culture theory emphasizes the active role of audiences in shaping the meaning and impact of media texts (Hall, 1980: 128-138). In the context of adolescent girls' access to SRHR information through mobile media, the participatory culture theory proposes that girls are not passive recipients of information, but rather active participants in seeking, interpreting, and utilizing SRHR content in their social and cultural context (Kirby *et al.*, 2011: 153). Mobile media then enables adolescent girls to seek out SRHR information that is in sync with their experiences and needs (negotiated decoding) (Hall, 1980: 132), engage with SRHR content that challenges dominant discourses and offers alternative perspectives (oppositional decoding) (Hall, 1980:133), produce and share their own SRHR-related content, becoming producers and distributors of information (participatory culture) (Jenkins *et al.*, 2013: 23).

The core issue of the participatory culture theory is that it throws its spotlight on the consideration of the social and cultural contexts in which adolescent girls' access and engage with SRHR information through mobile media. Factors like power dynamics (how do societal norms, family expectations, and peer relationships influence girls' access to SRHR information and their ability to make informed decisions about their health (Gilliam *et al.*, 2018: 346)?; cultural background (how do the cultural beliefs and values for the adolescent girls shape their understanding and interpretation of SRHR information (Savage *et al.*, 2019: 255)?; technological literacy (how do

the skills and experiences of the adolescent girls with mobile media affect their ability to have and use SRHR information (Bryant *et al.*, 2020: 2054)?

Participatory culture theory takes cognizance of the fact that adolescent girls are active participants in the production and consumption of SRHR information through mobile media. Hall the proponent of this theory highlights the need for inclusive and culturally sensitive approaches to SRHR education and advocacy (IPPF, 2019:12). du Gay postulates that cultural studies must focus on the ways in which cultural practices and texts are "embedded in specific social and historical contexts" (du Gay, 1997:12). He further makes his point by saying that cultural objects, like mobile media, are "constructed, circulated, and consumed" within specific cultural and social contexts (du Gay, 1997: 15).

Du Gay underlines the need to consider the "cultural circuit" of production, circulation, and consumption when analysing cultural practices and texts (du Gay, 1997: 20). He argues that this approach allows researchers to examine how cultural meanings are created, negotiated, and contested across different sites and contexts (du Gay, 1997: 22). Giving adolescent girls' access to SRHR information through mobile media as the context, du Gay would suggest that researchers should examine the cultural circuit of production, circulation, and consumption of SRHR content. This includes analysing how content is made, spread and used by girls. Added to that, how it is shaped by cultural norms, values, and beliefs (du Gay, 1997: 25). Du Gay's theory also highlights the importance of considering the "cultural economy" of mobile media, to mean the ways in which cultural objects are commodified, marketed, and consumed (du Gay, 1997: 30). He argues that this approach allows researchers to examine how cultural meanings are created and negotiated through the production and consumption of cultural goods and services (du Gay, 1997: 32).

Virginia Nightingale (1996:15) in discussing the concept of the "active audience" argues that it is problematic because it overlooks the power dynamics at play in the consumption of media texts. She contends that the idea of an "active audience" suggests that viewers have complete control over their interpretation of media messages, when in fact, their interpretations are shaped by societal structures and cultural norms (Nightingale, 1996: 15). She posits that audiences are not wholly free to come up with their own meanings, as their interpretations are predisposed by their social and cultural contexts (Nightingale, 1996: 18). Her suggestion is that media texts are

embedded with preferred meanings that are intended to shape audience interpretations in specific ways (Nightingale, 1996: 20).

Using adolescent girls' access to SRHR information through mobile media as the backdrop, Nightingale's argument would be that girls' interpretations of SRHR content are shaped by societal norms, cultural values, and power dynamics. Their understanding of SRHR information may be influenced by factors such as gender roles, sexual norms, and cultural beliefs about reproductive health (Nightingale, 1996: 22). The point Nightingale is driving home is the need to consider the structural and cultural constraints that shape audience interpretations of media texts. By acknowledging these constraints, researchers can better understand how adolescent girls engage with SRHR information and how mobile media's content can be shaped to support their health and well-being. The argument by Nightingale (1996: 22) is also made by The Nationwide project's research on television audiences and cultural studies which highlights the importance of considering the cultural and social contexts in which audiences engage with media texts (Morley and Brunson, 1999; Morley, 1992). With regard to adolescent girls' access to SRHR information through mobile media, this means recognizing that girls' engagement with SRHR content is shaped by their cultural backgrounds, social environments, and personal experiences.

Applying the project's findings on television audiences to mobile media, Adolescent girls' cultural backgrounds and identities (cultural identity) shape their interpretations of SRHR information and their engagement with mobile media (National wide Project, 1995:12); girls' social environments(social context), including their families, peers, and communities, impacts their access to and engagement with SRHR content on mobile media ; adolescent girls' personal experiences and individual circumstances (personal experiences), such as their sexual health and relationships, shape their engagement with SRHR information on mobile media.

By recognizing these factors, researchers and practitioners can develop culturally sensitive and effective health interventions that support adolescent girls' access to SRHR information through mobile media. John Fiske's work on the "play" and "pleasure" of audiences (Fiske, 1989) is another approach that can be used to explore how adolescent girls' access SRHR information through mobile media. Fiske's postulation is that audiences engage with media texts in a playful manner, seeking pleasure and enjoyment (Fiske, 1989). Similarly, adolescent girls in accessing in SRHR information on mobile media may engage with content in a way that is playful and enjoyable like

exploring sexual health and relationships in a safe and private space; engaging with interactive content, like quizzes or games, that teaches SRHR information; sharing SRHR content with friends and peers, creating a sense of community and social bonding

Fiske wants the pleasurable and playful aspects of audience engagement with media texts, including SRHR information on mobile media to be factored in. By designing content that is enjoyable and interactive, health practitioners can increase adolescent girls' engagement with SRHR information and support their health and well-being.

The concept or idea of participation and participatory culture has been criticized by Henry Jenkins (2006), a media scholar, in several ways:

1. Commercial co-optation: Jenkins argues that participatory culture has been co-opted by commercial interests, which exploit user-generated content for profit (Jenkins, 2006).

2. Unequal power dynamics: He highlights that participation is not always equal or democratic, with some individuals or groups holding more power or influence than others (Jenkins, 2006).

3. Exclusion and marginalization: Jenkins notes that participatory culture can also exclude or marginalize certain groups, such as those with limited access to technology or cultural capital (Jenkins, 2006).

4. Exploitation of labour: He critiques the exploitation of user labour, where individuals create content without compensation or recognition (Jenkins, 2006).

5. Lack of critical thinking: Jenkins argues that participatory culture often prioritizes creativity over critical thinking, leading to a lack of reflection on the cultural and social implications of our actions (Jenkins, 2006).

In the context of adolescent girls' access to SRHR information through mobile media, Jenkins' critique highlights the need to consider issues of power, inequality, and exploitation in the design and implementation of participatory health interventions.

The critique by Jenkins (2006) on the concept of participation differs from that of Nico Carpentier (2011) who views participation in the context of individuals engaging with media and communication technologies to both construct and deconstruct power relations. Carpentier identifies two main approaches to participation: the sociological approach, which sees

participation as taking part, and the political approach, which views participation as sharing power (Carpentier, 2020). Additionally, Carpentier emphasizes the need to move beyond the "ladder of participation", which makes intensive forms of participation a priority rather than considering the different ways in which people may engage with media and communication technologies (Carpentier, 2016). In view of the adolescent girls' access to SRHR information on mobile media, Carpentier's work throws light on the importance of considering power dynamics and the ways in which adolescent girls may engage with communication technology and construct their own meanings around SRHR information.

The work of Jenkins (2006) on 'convergence culture' (2006) and 'spreadable media' (Jenkins, Ford and Green, 2013) can be related to participation and participatory culture theory if seen from the point of view of adolescent girls' access to SRHR information through mobile media. Jenkins argues that convergence culture enables new forms of participation and collaboration, where individuals can actively engage with media content (Jenkins, 2006: 3). With the milieu of SRHR information on mobile media, this means that adolescent girls can engage with and share content, creating a participatory culture around sexual reproductive health and relationships.

Jenkins and colleagues discuss how *spreadable media* enables participants to actively shape and spread media content, creating a participatory culture (Jenkins *et al.*, 2013: 1). With adolescent girls' access to SRHR information on mobile media, this implies that adolescent girls can actively share and discuss content, creating a participatory culture that spreads information and support.

On participatory culture theory, Jenkins' work says that it is important to understand how individuals engage with and shape media content (Jenkins, 1992). SRHR information on mobile media and adolescent girls' access, it means recognizing adolescent girls' agency and creativity in seeking, sharing, and creating content related to sexual reproductive health and relationships. By considering Jenkins' work on convergence culture, spreadable media, and participatory culture theory, we can better understand how adolescent girls engage with SRHR information on mobile media and how to design participatory health interventions that support their health and well-being.

Participatory culture must be seen to contain many facets as argued by Danah Boyd in her work *Participatory Culture in a Networked Era* (2016), co-authored with Jenkins and Ito. She argues that participatory culture changes the focus from 'what' people are doing online to 'how' they are doing it. (2016: 12), Boyd talks of participatory culture as not just about individual creativity or

consumption, but about the social and cultural contexts that shape and are shaped by our practices (2016: 15). For her, ‘networked publics’ are spaces in which people meet to participate in cultural conversations, share ideas, and build relationships (2016: 23). Her understanding of 'participation' is complex, and its meaning changes according to the context (2016 :35). She makes it very clear that participatory culture is not a destination but a process that requires ongoing effort and negotiation (2016: 50). She suggests that engaging with culture and not just doing the analysis of it from a distance is the best way to understand participatory culture (2016: 67) and that it is not an answer, and it is important to admit the problems and complexities associated with it (2016: 82)

3.2.1 The Relevance of Participatory Culture to this Study

Looking at boyd’s (2016) concept of participatory culture in the light of adolescent girls’ accessing SRHR information through mobile media, the girls are likely to engage with SRHR information in a more interactive and social way, the networked publics like online forums and social media groups give spaces for girls to discuss SRHR issues and share experiences, participation in online SRHR discussions can vary depending on factors like privacy concerns and comfort levels, ongoing effort and negotiation are necessary to create inclusive and supportive online environments for girls' SRHR discussions, engaging with mobile media and online communities can give valuable insights into girls' needs and preferences regarding SRHR information, challenges like online harassment and misinformation must be acknowledged and addressed to ensure safe and empowering participatory cultures for girls' SRHR access.

One of the mobile media online technological developments that has an impact on cultural production and consumption is YouTube (Burgess and Green, 2009). Burgess and Green (2009) critically examine public debates about YouTube and its role in struggles for authority and control in the new media environment by drawing on theoretical sources and empirical research to discuss how YouTube is utilized by media industries, audiences, amateur producers, and communities of interest. Additionally, they look at various ways of how these uses by media industries, audiences, amateur produces, and communities of interests pose problems on the existing ideas about cultural production and consumption. The participation of different groups including media audiences and amateur producers, and community of interests shows how participatory culture on YouTube challenges traditional ideas of media creation and consumption (Jenkins, 2006).

When applied to adolescent girls' engagement with mobile media on SRHR information, mobile media platforms such as YouTube can enable adolescent girls to engage with SRHR information in a more participatory and interactive way (Boyd, 2014). Furthermore, through participatory culture as conceptualized by Burgess and Green (2009), adolescent girls' engagement with mobile media platforms can challenge traditional approaches to health education and sharing of information since the girls can be an audience, interested communities or amateur producers. This would help in recognizing the agency and creativity of adolescent girls in seeking and sharing SRHR information which can lead to designing more effective and inclusive health interventions (Boyd, 2014).

The breaking of new ground with Smartphones has enabled the use of different online platforms and activities which can be linked to participatory culture in the following ways: Smartphones enable users to create and share content, such as videos, photos, and blogs, which enhances participation in online communities (Jenkins, 2006), Smartphones provide access to social media platforms, which facilitate participation in online discussions, networking, and collaboration (Boyd, 2014), Smartphones have given rise to mobile-specific platforms like Instagram and TikTok, which are designed for mobile participation (Katz and Rice, 2013).

Search engines are linked to participatory culture in the following ways that include: Search engines enable users to seek information, which is a fundamental aspect of participatory culture (Burgess and Green, 2009); Search engines aid the discovery of new content, which can lead to participation in online communities and discussions (Hargittai, 2002); Search engines support learning and education, which are very important components of participatory culture (Jenkins, 2006).

Participatory culture links to searching online which is a cardinal aspect of participatory culture because it enables users to seek information and learn (Burgess and Green, 2009), Searching online encourages content creation because users seek information to inform their own creative pursuits (Jenkins, 2006), Searching online leads to engagement with online communities, supporting and enhancing participation and collaboration (Boyd, 2014). Participatory culture and online searching are crucial access to information in that Search engines provide access to SRHR information, enabling adolescent girls to make informed decisions about their health (Hargittai, 2002), Online communities and forums give support and connection for adolescent girls seeking SRHR

information and resources (boyd, 2014), Adolescent girls can create and share content related to SRHR, fostering participation and awareness (Jenkins, 2006).

Axel Bruns' work on participatory culture focuses on the blurring of production and consumption, where users are no longer just passive consumers but also active producers of content (Bruns, 2008). According to him, users can create and share their own content such as videos, blogs, or social media posts, blurring the lines between production and consumption (Bruns, 2008). They can also share information and resources with each other, creating a participatory culture of peer-to-peer knowledge sharing (Boyd, 2014). This also brings about interactive engagement like mobile media platforms that provide interactive features, such as comments, likes, and shares, which allow users to engage with content in a more participatory and immersive way (Jenkins, 2006).

The blurring of production and consumption make users to co-create knowledge and meanings around health issues, fostering a sense of agency and ownership (Bruns, 2008). By recognizing the blurring of production and consumption, interventions can be designed that encourage user-generated content and peer-to-peer information sharing, provide interactive features for engagement and participation, support the co-creation of knowledge and meanings and this approach can increase' access to information, promote participatory culture, and enhance a sense of agency and empowerment.

As adolescent girls engage with mobile media as they search for and share SRHR information they are engaged in participatory culture as they interact with the content and with each other. The understanding of participation and interaction are different activities as argued by du Gay, *et al.* (1997), that participation is different from interactivity, because it refers to the properties of a culture where individuals and groups make decisions that have an impact on shared experiences. whereas interactivity refers to the properties and design of technology that makes it possible for users to have some agency while using the technology (Jenkins, 2006). For Carpentier, (2011), there are two different types of participation which are: participation ‘in’ and participation ‘through’ the media with the former involving participation of non-professionals in the production of media output and decision-making, while the latter involves opportunities for public debates and self-representation in public spaces. Participation and interaction are both present in audience activity (Morley, 1992) because participation is necessary in shared social practices and culture

(du Gay *et al.*, 1997), and interaction enables the signification and interpretation that is triggered by the consumption of media (Hall, 1980).

The concepts of participation and interactive audiences works in adolescent girls' access to SRHR information through mobile media in the sense that participation 'in' mobile media allows adolescent girls to take part in the creation and sharing of SRHR content, such as videos, blogs, or social media posts, becoming active producers of information (Carpentier, 2011) while participation 'through' mobile media provides opportunities for adolescent girls to engage in public debates, discussions, and self-representation, fostering participation in SRHR issues (Carpentier, 2011).

Interactive audience would imply that mobile media enables adolescent girls to interact with SRHR content, engaging in signification and interpretation processes that shape their understanding of sexual health (Hall, 1980). Agency and empowerment would mean that participating in and through mobile media, adolescent girls can exercise agency and empowerment in seeking and sharing SRHR information, challenging traditional power dynamics (du Gay *et al.*, 1997).

Mobile media would also facilitate the co-creation of knowledge and meanings around SRHR issues among adolescent girls, promoting a sense of ownership and shared understanding (Bruns, 2008). The importance of participation and interactive audiences presupposes designing interventions that encourage users to create and share content; provide opportunities for public debate and self-representation; foster interactive engagement with content; promote agency, empowerment, and co-creation of knowledge. Such an approach to participation and interaction can increase adolescent girls' access to SRHR information, promote participatory culture, and foster a sense of agency and empowerment.

3.2.2 Critique of Participatory Culture

The concept of participatory culture has not been without critics. In his arguments for participatory culture, Henry Jenkins views social media/web 2.0 as spreadable media in which consumers are actively involved in spreading content which is both significant to the consumers and socially meaningful to them (Fuchs, 2014). Jenkins has argued that through online platforms, consumers are involved in activities of sharing, co-creating, re-mixing, reusing, and adopting content on Facebook, YouTube, and other online platforms. Such web-based activities, for Jenkins formed a basis to refer to the web as a platform for consumer participation (Jenkins, 2008).

Fuchs (2014) has criticized Jenkins' usage of participatory culture because for him this expression emerges from political science and therefore connected to the theory of participatory democracy. For Fuchs (2014), "participation" in internet studies should be seen from the point of view of participatory democracy theory that emphasises democracy from the grassroots involving the empowerment of people to maximise their development potential. This idea of participation is what Carpentier (2011) espouses when he argues that for the involvement of non-professionals in the production of media output and decision making. Added to this type of participation is the idea of interactivity which allows the audience to interpret and make meaning from the media they that they are consuming (Hall, 1980). According to Fuchs, Jenkins' approach is reductionistic as it is a culturalist conception of participation and fails to consider participation in the light of participatory democracy which contains political, economic, and cultural dimensions. By not paying attention to the notion of participatory democracy, participatory culture fails to consider facets of participatory democracy, fails to acknowledge issues of ownership of platforms/companies, does not consider collective decision-making, class or the sharing of material benefits (Fuchs, 2014).

Fuchs (2014), further challenges participatory culture by positing that the users of platforms such as Google and Facebook do not participate in the economic-decision-making processes of these companies, and that the platforms owned by these corporations and others play a central role in mediating the participation of the cultural expressions of internet users. For Fuchs, "Participation means that humans have the right and reality to be part of decisions to govern and control the structures that affect them" (Fuchs, 2014: 57). Furthermore, cultural expressions on the internet can never be participation if the Internet is dominated by corporations that amass capital by exploiting and commodifying users (Fuchs, 2014).

Fuchs (2014) criticises Jenkins for what he refers to as Jenkins' celebration of participatory culture in which consumers are involved in producing and distributing content, but does not concern himself with the pitfalls of the internet including such things as the exploitation of users, issues of privacy violations, and surveillance, the slavery conditions that miners extracting minerals for laptop production are exposed to. Fuchs argues that participatory democracy rather than participatory culture confronts and seeks to address the issues that affect people who are involved in the whole process of enabling people to access and use the internet.

In respect of this study, participatory culture falls short in that it does not answer the question of what motivates the adolescents to search for SRHR information on mobile media, and this is the reason for the inclusion of Self Determination Theory, that focuses on motivation, and responds to the "why" question of adolescents searching for SRHR information using Mobile Media.

3.3 Self-Determination Theory

The theory of self-determination was pioneered by Edward Deci towards the end of 1960 as he sought to understand the conditions that thwarted intrinsic motivation-desire to do an activity for one's enjoyment or out of personal interest (Sheldon *et al.*, 2003). In his experiment to find out the factors that thwart intrinsic motivation, Deci employed a "free choice methodology in which intrinsic motivation is operationalized as the number of seconds spent doing an appealing target activity after being left alone" (Sheldon *et al.*, 2003: 359). Through this work, Deci found several factors that threaten intrinsic motivation, among them are: "performance-contingent rewards, time pressures, threats of punishment and certain types of competition" (Sheldon *et al.*, 2003: 359). Together with some field and survey data, Deci's findings were encapsulated into a theory known as Cognitive Evaluation Theory [CET] (Sheldon *et al.*, 2003).

Ryan and Deci (2000: 68), the originators of SDT posit that SDT is "an approach to human motivation and personality that uses traditional empirical methods while employing an organismic metatheory that highlights the importance of humans' evolved inner resources for personality development and behavioural self-regulation." SDT is therefore the domain that focuses on the innate human growth propensities and natural psychological needs which are the ground for their self-motivation and personality integration in addition to the conditions that promote those useful operations (Ryan and Deci, 2000; Van den Broeck *et al.*, 2016). SDT speaks to fundamental human psychological needs while at the same time connecting both organismic and dialectical perspectives (Smailhodzic and Attema, 2016). Additionally, SDT considers the significance of human power and intentionality, and conditioned reactions to social environmental conditions (Smailhodzic and Attema, 2016, Legault, 2017).

The theory of self-determination "starts from the premise that the natural inclination and progression of human beings is towards psychological growth, internalisation and wellbeing and that humans act on-and are acted upon by the environment in ways that differentially facilitate or hinder the realisation of this natural progression" (Van den Broeck *et al.*, 2016: 1197).

Since the natural inclination for progression (growth) can either be encouraged or thwarted by the social environmental conditions, it should therefore not be taken for granted (Legault, 2017, Ryan and Deci, 2004). Indeed, a deficiency in social environmental conditions weakens the basic psychological needs of competence, autonomy and relatedness thereby causing people to be fragmented, controlled and alienated (Legault, 2017). Additionally, "when the basic psychological needs are unmet, individuals experience greater apathy, irresponsibility, psychopathology, arrogance, and insecurity" (Legault, 2017: 5). Inversely, the satisfaction of the basic psychological needs, has been hailed to lead people to more openness, maturity, growth and development; for example, when social environmental conditions support the basic psychological need of autonomy, a person's inner motivation is nurtured by providing choice and pliability for making decisions (Legault, 2017). In arguing for the significance of social environment for the flourishing of basic psychological needs, Ryan and Deci (2014), posited that when the basic psychological needs have been supported by the social environment in which individuals are raised, the individuals have demonstrated autonomous motivation for various tasks. The environment plays a crucial role in the flourishing of the basic psychological needs as argued by Jang et al. (2009), that the environment within which an individual lives exerts an influence in the fulfilment of autonomy, competence and relatedness; therefore, a supportive environment is fundamental in the fulfilment of the three basic psychological needs in the theory of self-determination.

The Theory of Self-Determination (SDT) proposes that human behaviour is motivated by three innate psychological needs: autonomy, competence, and relatedness (Deci and Ryan, 2000). This theory emerged from the field of psychology, specifically from the subfield of motivation and personality. Autonomy refers to the need to feel a sense of volition and control over one's actions. Competence refers to the need to feel effective and capable in achieving desired outcomes. Relatedness refers to the need to feel connected and valued by others (Deci and Ryan, 2000). An explanation of these basic needs is necessary at this point for purposes of properly linking these concepts to this study.

Autonomy: this implies that an individual has a sense of choice concerning personal behaviour (Ntoumanis *et al.*, 2020). Similarly, autonomy means a person is perceived as being the origin or source of their own behaviour, and it moves people to behave in a way that makes them feel they initiated and chose a particular behaviour (Smailhodzic and Attema, 2016, Ryan and Deci, 2004).

A person acts autonomously when they act from interest and integrated values, implying that the actions of autonomous individuals are made as an expression of self even when externally influenced because such individuals agree with the influences, embrace them, value them, and make them their own (Ryan and Deci, 2004, Legault, 2010). According to Ryan and Deci (2000), autonomy in SDT should not be misconstrued to imply individualism, independence, or hostility to relatedness and/or community. It is quite the opposite because it is the feeling of self-determination alongside any action, dependent or independent, collectivistic or individualistic (Ryan and Deci, 2000, Ryan and Deci, 2004). In this manner, autonomy cannot be said to be selfish to or detached from relatedness and/or community (Ryan and Deci, 2004). The construct of autonomy in SDT is connected to the constructs of competence and relatedness as it:

> facilitates internalisation and, in particular, is a critical element for a regulation to be integrated. Contexts can yield external regulation if there are salient rewards or threats and the person feels competent enough to comply; contexts can yield introjected regulation if a relevant reference group endorses the activity and the person feels competent and related; but competent contexts can yield autonomous regulation only if they are autonomy supportive, thus allowing the person to feel competent, related, and autonomous (Ryan and Deci, 2000: 73).

Competence implies that a person feels effective in their interactions with the social environment and expresses one's own capacities (Smailhodzic and Attema, 2016). The need for competence is an inherent sense of control over one's environment and the ability to develop new skills. This basic psychological need holds that human beings have a natural propensity to explore and control the environment, and to come up with new skills (Ryan and Deci, 2000). The psychological need for competence, Ryan and Deci (2000), argue that perceived competence operates based on relative internalisation of extrinsically motivated behaviour because people are more given to embrace activities relevant to the values embraced by their social groups, and this happens when they possess feelings of effectiveness. Additionally, competence is the inward feeling of effectiveness which is not required as a skill or capability (Ryan and Deci, 2004). It is a need that propels people

to look for challenges that are favourable to their capacities for them to continuously and firmly make efforts to grow their capacities and skills through activity (Ryan and Deci, 2004).

Relatedness is a basic psychological need that implies a natural inclination to connect with others, to love, and be loved by others, to care for and be cared for by others (Ryan and Deci, 2000). The need for relatedness is innate in human beings as they naturally desire to forge and sustain interpersonal relationships, and the theory of self-determination explains relatedness as the need to belong, to be close to, to be intimate with others and to stay connected to them (Parent, 2022). Similarly, relatedness is the feeling of connectedness to others, caring for and receiving care from others, having a sense of belongingness with others as well as with one's community (Ryan and Deci, 2004). Furthermore, the psychological need of relatedness,

> reflects the homonymous aspect of the integrative tendency of life, the tendency to connect with and be integral to and accepted by others. The need to feel oneself as being in relation to others is thus not concerned with the attainment of a certain outcome (e.g., sex) or formal status (e.g., becoming a spouse, or a group member), but instead concerns the psychological sense of being with others in secure communion or unity (Ryan and Deci, 2004: 7).

Therefore, embedded in this basic psychological need of relatedness is the desire for an individual to see oneself as belonging to a group, forging close relationships and experiencing some form of communion (Ryan and Deci, 2000).

3.3.1 SDT's Relevance to this Study

SDT is relevant to this study particularly in the context of adolescent girls' access to SRHR information through mobile media, for several reasons. The impact of the Covid-19 pandemic on the daily lives of adolescents affected the satisfaction of their basic psychological needs of autonomy, relatedness and competence due to many governments'-imposed restrictions on movements and face to face interactions (Parent, 2022). To satisfy their basic psychological needs, adolescents leveraged smartphones and social media (Parent, 2022) since such technologies do not require movements or face to face interactions. In advancing an argument for the reliance on social media for adolescents' reliance on social media to support their basic psychological need satisfaction, Parent (2022) posited that research during the Covid-19 pandemic demonstrated how

smartphones and social media played an important role in advancing adolescent feelings of connectedness and relatedness. On **Autonomy**, Parent (2022) argued further, that technologies of smartphones aided adolescents' satisfaction of the need for autonomy in the face of government and parental restriction on movements and face to face interactions. Indeed: Mobile media can provide adolescent girls with a sense of autonomy in seeking and accessing SRHR information, allowing them to make informed decisions about their health (Deci and Ryan, 2000). Mobile media can provide SRHR information by providing space for adolescents to listen to and be listened to by others, while minimising control over adolescents as they express themselves, allowing and encouraging them to ask questions, to express their opinions (Smailhodzic and Attema, 2016). However, it should be pointed out there is a downside to adolescent girls over reliance on social media and smartphones which is that these technologies promoted online addictive behaviours (Parent, 2022). Adolescents may be attracted to satisfy their psychological need for autonomy via social media and mobile media as such technologies offer them opportunities to choose what to engage in, who to interact with, where to engage or interact from, when to engage with peers and the online technologies (Parent, 2022). In addition, Parent (2022) further argues that as adolescents develop, they desire to act independent of external constraints, and to some extent such desire finds support in the use of social media [mobile media] as these provide affordances for the expression of choice, freedom and control over one's environment, and this is the fulfilment of the basic psychological need of autonomy.

Competence Interactive features in mobile media, such as quizzes and games, can enhance adolescent girls' feelings of competence in understanding SRHR issues (Deci and Ryan, 2000). From the perspective of health-related behaviours, competence would translate into a person feeling "effective in engaging in health-related behaviours and interacting with the social environment about the disease and has the possibility of acting on his or her capabilities concerning health related behaviours" (Smailhodzic and Attema, 2016:5). This construct has resonance with the second, third and fourth research questions in this study since these questions centre on the experiences of adolescents in their interactions with mobile media and each other to access and share SRHR information which could make them feel effective in their interactions with the social environments.

Relatedness: Mobile media can provide a sense of relatedness among adolescent girls, fostering a community of support and connection around SRHR issues (Deci and Ryan, 2000). According to Parent (2022), the affordances of social media help to satisfy the psychological need for relatedness, and that the adolescents who feel inadequate to interact on a face-to-face basis are helped by the affordances of online technology.

The basic psychological need of relatedness in adolescents is linked to their developmental process since in this period of their lives they seek to expand their social network beyond their immediate family circles as they desire acceptance and fame among peers (Parent, 2022). Given the need to expand their social networks adolescents are motivated to use social media to interact with friends, generate support with peers, and forge new relationships with others; foster close connections with their peers as such media provide an environment of openness in their sharing as compared to face to face interactions (Parent, 2022). In the context of health, the affordances of social media enhance relatedness as patients communicate with each other and share information and advice via social media platforms (Smailhodzic and Attema, 2016). Indeed, through the affordances of social media, "patients can move from one-to-one, and one-to-many to many-to-many communication" (Smailhodzic and Attema, 2016: 2). Such affordances by social media allow for the application of the construct of relatedness in this study since it allows adolescent girls to connect with their peers as they seek for SRHR information in the context of Covid-19 induced school closures, and movement restrictions.

By acknowledging the importance of autonomy, competence, and relatedness, health communicators can design mobile media interventions that promote adolescent girls' self-determination, empowerment through information acquisition and interactivity with others as the adolescent girls' grapple with their SRHR challenges.

3.3.2 Areas of study applying Self Determination Theory

Self-determination theory has been applied to areas such as health, education, work, and sport (Sheldon *et al.*, 2003). In fact, Sheldon *et al.* (2003) posited that self-determination theory stands out as having been of significant influence in the fields of education, health, and psychology. Moreover, recently, there has been a significant increase in the application of SDT in the realm of health interventions, chiefly in intervention studies focused on promoting health conducive behaviours (Ntoumanis *et al.*, 2020). Examples of such behaviours are but not limited to: increased

physical activity, healthy eating, abstaining from use of tobacco (Ntoumanis *et al.*, 2020; Ng *et al.*, 2012; Williams *et al.*, 2011; Hagger *et al.*, 2016; Teixeira *et al.*, 2015). Additionally, SDT has been employed in health interventions that promote health treatments like medication adherence, and self-management of conditions such as diabetes, and self-regulation of health behaviour (Ntoumanis *et al.*, 2020; Ng *et al.*, 2012). Indeed, SDT has been used in health communication and behaviour change, particularly in motivational interviewing [MI] (Miller and Rollnick, 2012). SDT focuses on autonomy, competence, and relatedness, promoting intrinsic motivation and volition (Deci and Ryan, 2000).

When SDT has been used in the realm of health, it has also centred on the perceptions of patients', towards their practitioners' support for their autonomy as well as their other fundamental needs of competence and relatedness (Ng *et al.*, 2012). The SDT theory was also used in a study that sought to explore the effects of social media-based patient-to-patient communications on doctor-patient interactions (Smailhodzic and Attema, 2016). In discussing social media reliance by patients, Smailhodzic and Attema (2016: 3), contended that "social media has changed the way in which people access, create, and use information and services, and it enables patients to get into contact with other patients who share the same interests and goals." Additionally, "many health-related outcomes heavily depend on an individual's motivation to engage in the necessary health-related behaviours (e.g. physical activity, taking medicines, and following a diet" (Smailhodzic and Attema, 2016: 5). Given this heavy dependence on motivation for individuals to engage in health-related behaviours, SDT can potentially explain healthcare related outcomes, and also can explain if a person at all will engage in health-related behaviours or whether or not the person will internalise and be moved to engage in the said health behaviours (Smailhodzic and Attema, 2016). In similar manner SDT can potentially explain the internalisation and integration of sexual reproductive and health information accessed via mobile media by adolescents for them to act effectively within their environment to achieve positive sexual-reproductive-health-related outcomes.

Participatory culture theory and SDT share commonalities in their emphasis on autonomy, agency, and self-determination (Jenkins, 1992; Deci and Ryan, 2000). Both frameworks value the active involvement and engagement of individuals in the process of change. However, participatory culture theory, rooted in media studies and cultural studies, focuses on the ways in which

individuals engage with and participate in cultural practices, such as fan cultures or online communities, to construct their identities and meanings (Jenkins, 1992). SDT, on the other hand, is a psychological theory that focuses on the universal human needs of autonomy, competence, and relatedness, and their role in fostering intrinsic motivation and well-being (Deci and Ryan, 2000).

3.3.3 Critique of Self Determination Theory

There have been some criticisms levelled against the self-determination theory focused on their constructs of autonomy, relatedness, and competence. The construct of autonomy has been construed to imply individualism, independence or hostile to relatedness and community, but the reality as argued by Ryan and Deci (2000) is quite the opposite because it is the feeling of self-determination accompanying any action, dependent or independent, collectivistic or individualistic. In this way, rather than being selfish to, or detached from relatedness or community, autonomy is attached and related to the community (Ryan and Deci, 2000).

The construct of autonomy has been further questioned by critics who have argued that it is not a universal psychological basic need, and for this reason cannot be applied across cultures (Jang *et al.*, 2000). Criticism of this nature has viewed autonomy to be pro-western, and therefore not applicable in cultural contexts that are more collectivistic, and place emphasis on conformity as opposed to independence (Jang *et al.*, 2009). This argument has been rebutted by proponents of SDT, who have argued that "it is a conceptual error to equate the concept of autonomy with concepts such as individuality, uniqueness, and independence. Autonomy connotes an inner endorsement of one's behaviour, not a separating of the self from one's ties with others (Jang *et al.*, 2009: 645)." From this argument, it can be deduced that "it is perfectly consistent for individuals to be autonomously interdependent to act autonomously in accord with the communal good, and to embrace autonomously endorsed collectivistic values (Jang *et al.*, 2009: 645)." Furthermore, the concept of autonomy in SDT does not in any way suggest or imply a disposition of an individual not caring about other people's opinions or expectations of the community (Jang *et al.*, 2009). Similarly, as opposed to the misconception that autonomy suggests the need to act in disregard to other people's desires, it implies the need to act out of one's free will, notwithstanding that doing so means acting in line with the desires of other people (Ryan and Deci, 2000).

3.4 Complementarity of Self Determination Theory and Participatory Culture in this Study

The two theories of Participatory culture and Self-determination theory complement each other in that whereas the former focuses on information acquisition and sharing via mobile media, the latter goes beyond information seeking and acquisition to focus on empowerment through mobile media for the adolescents to be self-determinant, and competent to interact with their environment and act in ways that would promote positive sexual reproductive health behaviours. The following are key points that link the two theories:

Autonomy: Both theories are very clear on how important autonomy and agency is in individual behaviours and cultural practices (Deci and Ryan, 2000; Jenkins, 1992).

Intrinsic motivation: SDT's intrinsic motivation mainly parallels the participatory culture theory's emphasis on individuals' intrinsic interests and passions driving their engagement with cultural practices (Deci and Ryan, 2000; Jenkins, 1992).

Self-determination: The two theories deem as important self-determination, with SDT focusing on the psychological needs that promote it, and participatory culture theory highlighting individuals' active construction of meaning and identity through cultural participation (Deci and Ryan, 2000; Jenkins, 1992).

Contextual support: SDT takes a supportive social context as very cardinal in fostering autonomy and intrinsic motivation (Deci and Ryan, 2000), while participatory culture theory understands the role of cultural contexts and communities in shaping individual engagement and meaning making (Jenkins, 1992).

Motivation being the baby of Self-Determination Theory, is driven by four aspects of activity and intention namely:

1. Energy: Which means the quantity and intensity of motivation that sparks off the level of engagement and effort invested in an activity (Deci and Ryan, 2000). In relation to adolescent girls' access to SRHR information through mobile media, energy stand for the drive and enthusiasm to seek out and engage with relevant content.

2. Direction: Accounts for the orientation and focus of motivation, defining the specific goals and outcomes that are sought after (Deci and Ryan, 2000). For adolescent girls, direction might involve

seeking SRHR information to make informed decisions about their sexual health, relationships, and well-being.

3. Persistence: Speaks of the endurance and sustainment of motivation over time, impacting the ability to stop obstacles and maintain engagement (Deci and Ryan, 2000). Relating it to mobile media, persistence might involve continued engagement with SRHR content despite potential barriers, such as limited access or societal stigma.

4. Equifinality: Represents the elasticity and adaptability of motivation that keys in multiple paths to achieve desired outcomes (Deci and Ryan, 2000). For adolescent girls, equifinality might involve exploring various mobile media platforms and resources to access SRHR information, adjusting their approach as needed to achieve their goals.

By understanding these four aspects of motivation, researchers and practitioners can design mobile media interventions that enhance energy by coming up with engaging and interactive SRHR content, support direction by offering goal-oriented resources and information, promoting persistence by providing encouragement and support through mobile media and encourage equifinality by offering diverse and adaptable SRHR resources

Scholars have used Self-Determination Theory (SDT) in SRHR and mobile media. Here are some examples: The Oxford Handbook of Self-Determination Theory contains a chapter that explores how SDT can be applied to individuals, industry, and society in digital environments (Ryan *et al.*, 2019); A theoretical review looks at how adolescents' social media use can satisfy their basic psychological needs, impacting their identity formation, peer affiliation, and overall well-being (Király *et al.*, 2019). Researchers have applied SDT to understand motivation and psychological needs in various contexts, including education (Niemiec and Ryan, 2009), work (Gagné and Deci, 2005), and health (Williams *et al.*, 2011), which can include sexual reproductive health and Rights.

Conclusion

In brief this chapter, has presented the theoretical framework applied in this study. Participatory Culture Theory and the Self Determination Theory. Participatory Culture emphasizes the importance of active participation and engagement in cultural practices, such as seeking SRHR information through mobile media, recognizes adolescent girls as active agents in constructing their own meanings and identities through mobile media use, highlights the potential for mobile

media to provide a sense of connection and interaction for adolescent girls regarding access to SRHR information during the Covid-19 pandemic. Self-Determination Theory basically throws its spotlight on the psychological needs of autonomy, competence, and relatedness in motivating behaviour like seeking SRHR information through mobile media. This theory submits that mobile media can support adolescent girls' autonomy and competence in accessing SRHR information and gives a sense of relatedness to others. As well as that, it sees intrinsic motivation and volition important in sustaining engagement with SRHR information through mobile media during the pandemic.

It is by combining these theories that one can understand how adolescent girls' participation in mobile media culture can support their self-determination and motivation to access SRHR information, promoting their overall well-being and health during the Covid-19 pandemic.

CHAPTER FOUR

4.0 METHODOLOGY

4.1 Introduction

This section presents the research design and the methodology that this study adopted. It discusses the philosophical underpinnings of this study as well as the methods for data collection and analysis. Additionally, it presents the process followed for ethical clearance. Other issues discussed in this section are sampling criteria, inclusion and exclusion criteria.

4.2 Research Design

The approach of this study is qualitative which seeks to understand experiences of adolescent girls on their engagement with mobile media in their access to SRHR information during Covid-19. Qualitative studies investigate and seek to comprehend the meanings that individuals or groups ascribe to particular social or human phenomena (Creswell, 2014: 4). Put differently, the objective of qualitative research is better placed to understand human experiences that cannot be captured in statistical limitations as is the case with quantitative research (Alharahsheh and Pius, 2020). Furthermore, qualitative research also has a focus on manifold perspectives and meanings of participants while locating the research within the context or setting of the participants (Creswell and Poth, 2018). It has the intention of understanding, describing, and explaining social phenomena from the inside' in a variety of ways. It analyses the experiences of individuals and groups in view of understanding "how people construct the world around them, what they are doing, how they are doing it as what is happening to them in terms that offer rich insights" (Flick, 2018: 5). By taking a qualitative approach, the study allowed the participants the latitude to share their experiences of accessing and sharing information on sexual reproductive health and rights using mobile media.

This study falls within the category of exploratory studies. In a general sense, to explore is to study, examine, analyse, or investigate something (Stebbins, 2019). By definition, "an exploratory study seeks to respond to a question or to address a phenomenon" (Singh, 2021). The latter part of this definition is useful for this study as it explores the experiences of adolescent girls' engagement with mobile media to access sexual reproductive health and rights information in the context of the Covid-19 pandemic in Lusaka, Zambia. Indeed, the study explores what adolescent girls have been doing, and how they have been doing the search to access SRHR information via mobile

media to understand, explain and describe their social phenomena 'from the inside.' Furthermore, it explores how young people were coping with the reality of searching for health information on SRHR amid the movement-restrictions and school closures induced by Covid-19 given that qualitative research also seeks to understand how people cope with certain realities in their real-world settings (Yin, 2016: 3).

4.3 Research Paradigms

A research paradigm is a significant concept in research as it guides the researchers in their research approach (Rahman, 2023). According to Cannella and Lincoln (2017:198), a paradigm is a primary set of beliefs that are constructed by human beings, and they lead the way to action. For Braun and Clark (2013: 4), a paradigm is a set of beliefs, assumptions, values and practices shared by the research community. Research paradigms are important in a study because they help to shape methodologies and research outcomes by having research questions and objectives aligned to the paradigms (William, 2024). According to Rahman, a research paradigm

> encompasses a set of beliefs, assumptions, and practices that guide the researcher's understanding of the research problem, methods of data collection and analysis, and interpretation of results. The paradigmatic perspective adopted by the researcher has a significant impact on the way in which they define their research problem, formulate hypotheses, choose research methods, and interpret their findings (2023: 1).

The constructivism paradigm is linked to the interpretivist paradigm as the former is considered as the mother to the latter (Adom *et al.*, 2016). Generally, researchers using the interpretive and constructivist paradigms are involved in qualitative research, and they do not subscribe to the social scientific model of objectivity (Thanh and Thanh, 2015; Leavy, 2017: 38).

This study adopted the constructivism and interpretivist paradigms. The constructivist and interpretivist paradigms were selected for this study because of their importance in social science research as they focus on comprehending human behaviour and social phenomena, and how reality is socially constructed (Adom *et al.*, 2016; William, 2024). Additionally, the study adopted these paradigms because they focus on subjective experiences of participants based on their differences in cultures, viewpoints, values, circumstances and times in their construction of social realities

(Alharahsheh and Pius, 2020). Furthermore, this research utilized an interpretivist and constructive paradigm as they are related and suitable for qualitative methods of research (Adom *et al.*, 2016). According to Thanh and Thanh, (2015:24), "researchers who are using interpretivist paradigm and qualitative methods often seek experiences, understandings and perceptions of individuals for their data to uncover reality rather than rely on numbers or statistics." Therefore, by electing to employ the interpretivist and constructivist paradigms, and qualitative design, the study seeks the experiences, understandings and perceptions of the adolescent girls in the four selected secondary schools on their engagement with mobile media as they searched for SRHR information during Covid-19. My choice of the interpretivist and constructivist paradigm is further guided by Rahman (2013) who argues that researchers who employ the constructivist and interpretivist paradigm focus on the experiences and perspectives of their participants and do not seek to generalise their findings to a larger population. This study focuses on the experiences and perspectives of the adolescent girls who participated in this study, and does not seek to generalize the findings to the larger population.

The interpretivist and constructivism paradigms utilise qualitative methods such as FGDs, in-depth interviews, and observations to collecting data on people's experiences and beliefs (Adom *et al.*, 2016; Rahman, 2023; William, 2024). This study, as shall be observed in section 4.4 employed FGDs as methods of data collection, and therefore it is appropriate that this employed the interpretivist and constructivist paradigms.

My justification for using these paradigms in this qualitative study is that they are suitable for gaining in-depth understanding into people's perceptions and experiences of a particular phenomenon

According to Teer-Tomaselli (2008), an interpretivist paradigm focuses on how people interpret content. In this study, the research community is the group of secondary school learners who were purposely selected as participants for the study. Content in this study is the subjective individual experiences and perspectives of adolescents in the four selected secondary schools in their searching, seeking, and sharing SRHR information via mobile media in the context of Covid-19. According to Thanh and Thanh (2015), the interpretivist paradigm emphasises that social phenomenon is socially constructed. This understanding is the central principle of interpretivism as it is anchored in the "belief that individuals construct knowledge based on their interpretations

and experiences. It emphasises the importance of subjective meanings and perspectives in understanding social phenomena" (William, 2024: 2) and helps in gaining in-depth understanding of a particular phenomenon (Alharahsheh and Pius, 2020). The interpretive paradigm relies on the context of the people as its basis, and therefore people's experiences are important as argued by Pervin and Mokhtar:

> As a research paradigm, interpretive research is based on the premise that social reality is shaped by way of human experience and social backdrop, thereby making it well suited to do research on human behaviour which are rooted in the context of its socio-cultural issues (2022: 421).

Since individuals construct social phenomena according to their subjective experiences and interpretations, there is not a single reality but multiple realities since reality is subjective and can differ from individual to individual depending on culture, values, viewpoints, circumstances and times (Alharahsheh and Pius, 2020). The researchers who employ the constructivism and interpretivist paradigms aim to understand the construction of reality by individuals based on their subjective experiences according to their social, historical and cultural environment (Adom *et al.*, 2016; Rahman, 2023).

The interpretivist and constructivist paradigms guided the study to rely on the participants' subjective views of their situational and contextual experiences (Creswell, 2007; William, 2024) in their quest to search for and share information on sexual reproductive health and rights. In this study, the constructivist and interpretivist paradigms allowed the researcher to see the world through the subjective lenses of the perspectives and experiences of the participants (Thanh and Thanh, 2015; Pervin and Mokhtar, 2022). This underscored the understanding that reality is not something that pre-exists and in need of being discovered, but that it is socially actively constructed by individuals (Rahman, 2023).

The participants' subjective views of a situation arise from individuals seeking to understand the world in which they live. The subjective meanings of their experiences are formed through interactions with others, and through historical and cultural norms at work in their individual lives (Creswell, 2007; William, 2024). Similarly, participants bring to the research their own values, experiences and perspectives (Braun and Clarke, 2013: 36). Given that the subjective meanings

and perspectives of participants according to their social and cultural contexts, they hold different versions of knowledge and truth, therefore underscoring the fact that there are multiple realities rather than a single reality (William, 2024). This study looks at the subjective meanings arising from the participants' subjective experiences as they try to understand and respond to the SRHR information challenges by engaging with mobile media in a world affected by the Covid-19 health crisis

The varied experiences and perceptions of participants are crucial to why I chose the interpretivist and constructivist paradigms since these varied perceptions and experiences underscore an important aspect of qualitative research which is that there are multiple ways of making meaning from the analysed data, and therefore, there is no single truth or single answer (Braun and Clark, 2013: 20). I elected to employ the interpretivist and constructivist paradigms because their suitability to the multiple interpretations of reality by participants as it aligned the findings to the relativist ontological position in which a single event may have multiple interpretations (Pervin and Mokhtar, 2022). Such a relationship between ontology and paradigm is important to underscore because a paradigm is based upon its ontological and epistemological assumptions which underpin particular research (Scotland, 2012). On the relationship between paradigms and philosophical assumptions of ontology and epistemology, Scotland (2012:9) posits that: "different paradigms inherently contain differing ontological and epistemological views; therefore, they have differing assumptions of reality and knowledge which underpin their particular research approach" (Scotland, 2012: 9).

Although the interpretivist and constructivist paradigms are hailed for their benefits, for example, because they allow scholars to use different views on phenomena to describe people, objects, events, and deeply understand them in their socio-cultural contexts, they have also been criticised (Pervin and Mokhtar, 2022). Some of the criticisms are the lack of objectivity because of their biased analysis that rely heavily on the personal interpretation of the researcher, and that the findings cannot be generalised (Pervin and Mokhtar, 2022). The rebuttal to such criticisms is that researchers using the constructivist and interpretivist paradigms "contend that neutrality and pure objectivity can never be reached because researchers like all people, have life experiences, attitudes, and beliefs that impact how they see, think and act" (Leavy, 2017: 38). For this reason, "through data analysis, interpretivist and constructivist researchers can explore, explain, express,

and attempt to place themselves in the participants' vision or thinking pattern in order to reconstruct the texts' intended meaning" (Pervin and Mokhtar, 2022: 424).

4.3.1 Epistemology

Epistemology concerns itself with the nature of knowledge, and it is a philosophical position focused on the production or generation of knowledge and what counts as 'valid' trustworthy or true knowledge (Braun and Clark, 2013: 28). Epistemology is also defined as the study of the process of knowing, and how the acquired knowledge is validated (Walsh *et al.*, 2014: 81; Rehman and Alharthi, 2016). According to Rahman, epistemology focuses on knowledge and belief as he posits:

> epistemology is the branch of philosophy that deals with the study of knowledge and belief. It explores questions such as: What is knowledge? How is knowledge acquired? What are the limits of knowledge? How do we distinguish between true and false beliefs? Epistemology aims to understand how we can justify our beliefs and determine what we can know with certainty. It examines the nature of evidence and reasoning, as well as the role of perception, memory, and language in the acquisition and validation of knowledge (2023: 2).

In a similar way, Scotland (2012), argues that epistemology concerns itself with the nature of knowledge, and that epistemological assumptions deal with how knowledge is arrived at, or how knowledge is acquired, or created and shared.

Ontological assumptions lead to particular epistemological assumptions, for example, the assumption that reality is socially constructed, and that there are multiple realities will lead to the notion that researchers have to be involved with their participants to understand phenomena in their environment (Rehman and Alharthi, 2016).

4.3.2 Ontology

According to Walsh *et al.* (2014: 81), Ontology is defined as "the study of the nature of reality." Rahman (2023: 2) argues that "Ontology is a philosophical field that deals with the study of what exists and how things are related to each other. It aims to answer questions about the nature of reality and what kinds of things exist in the world around us." According to Braun and Clarke

(2013: 27), “an ontological position concerns itself with what specifies the relationship between the world, and our human interpretations and practices.” Ontology concerns itself with such questions as: what is the nature of existence? Are there Objective truths? How do objects relate to each other and how do they relate to human beings? (Rahman, 2023). In research, ontology helps researchers to raise fundamental questions about basic assumptions of our understanding of the world around us (Rahman, 2023). The researcher’s assumptions about reality drive the researcher to investigate what kind of reality exists: singular or multiple (Rehman and Alharthi, 2016).

Ontologically, reality can be viewed on one hand as objective and that there are universal truths about reality that can be known, and on the other hand, reality can be viewed as subjective and contextual (Walsh *et al.*, 2014: 81). It is the latter view of ontology that I have employed in this study because of its subjective and contextual position which resonates with the understanding of reality as being relativistic (Braun and Clark, 2013). Relativism “argues that there are multiple constructed realities, rather than a single, pre-social reality or mind-independent truth, and that we can never go beyond these constructions” (Braun and Clarke, 2013: 27). Similarly, Scotland (2012: 11) argues that “relativism is the view that reality is subjective and differs from person to person.” Going by such arguments, what is understood as true and real is not uniform across contexts and time because truth and reality are affected by time and context, therefore what we can know is a reflection of place and manner in which knowledge is generated (Braun and Clarke, 2013: 27).

The philosophical assumptions: epistemology, and ontology, drawn from a paradigm inform data analysis (Singh, 2021). Therefore, the philosophical assumptions in this study have been applied to inform data analysis which considers and values the context of the participants’ experiences and perspectives (Thanh and Thanh, 2015). For this study, employing the constructivism and interpretivist paradigm, and applying the philosophical assumption of ontology as relativistic, have a linkage as is argued by Scotland (2012: 11), that “the ontological position of interpretivism is relativism.” In like manner, Thanh and Thanh (2015) argue that the objective of the interpretivist and constructivist paradigm is to value subjectivity and therefore, reality is a social construct. I found this understanding of ontology and its relationship to the constructivism and interpretivist paradigm suited to this study because the views, perceptions, and experiences of the participants are subjectively theirs and they are contextual. This is important to underscore the fact that the views, experiences, and perceptions of the participants of this study are exclusively theirs and are

specific to the Zambian context of adolescent girls' engagement with mobile media to access information on sexual reproductive health and rights during Covid-19.

4.4 Data Collection

This study employed Focus Group Discussions [FGDs] as a method for data collection. A focus group discussion is defined as a group discussion held with the guidance of a trained moderator about a particular topic (Sim and Waterfield, 2019). FGDs are also defined as a series of well-planned and moderated interactions whose aim is to gather personal experiences, beliefs, attitudes and perceptions from participants on a particular subject of interest (Gundumogula, 2020; Scheelbeek *et al.*, 2020; Nyumba *et al.*, 2018). This study focused on gathering perceptions and experiences of adolescents' access to sexual reproductive health and rights information via mobile media in the context of the Covid-19 pandemic. I employed FGDs as a method for data collection because it aligns with the qualitative design selected for this study and aligns with the paradigms selected, the research questions, and analysis of the findings. Since this is a qualitative study, FGDs were appropriate as a tool for data collection because they are a method of collecting data in qualitative research due to their capacity to provide in-depth data on a particular topic of interest (Adler *et al.*, 2019).

Additionally, I selected FGDs because of their capacity to bring out a variety of views, perspectives, and understandings of participants on particular issue (Bloomberg and Volpe, 2008; Braun and Clarke, 2013: 111). Furthermore, I selected FGDs because they are an efficient and cost-effective method of collecting data from numerous participants while retaining an emphasis on the importance of individual participant's views (Scheelbeek *et al.*, 2020; Flick, 2014 :314). Furthermore, FGDs were selected for their "potential to access forms of knowledge other methods cannot, and generate completely unexpected or novel knowledge" (Braun and Clarke, 2013: 111).

In view of the research participants for this study being from varied grades and age groups (between 13 and 19 years), I selected FGDs for data collection because of their potential to create a safe peer environment for children in addition to avoiding some power relations between researchers and participants which are present between an adult and a child in a one-on-one interview (Adler *et al.*, 2019). The environment needed to be safe because of the sensitivity of the research topic as well as the fact that data was collected from vulnerable participants.

The inclusion and exclusion criteria are outlined below. The age group in this study is the bracket that fits the definition of an adolescent as a person between 10-19 years of age (Singh *et al.*, 2019).

4.4. 1 Inclusion Criteria

The participants were drawn from the following selected secondary schools in Lusaka Province: Nakatete, Kabulonga Girls, Chongwe, and Mount Makulu. These schools are located in four different districts of Lusaka Province. Nakatete Secondary School is in Kafue District, while Kabulonga Girls is in Lusaka District. Chongwe Secondary School is located in Chongwe District while Mount Makulu Secondary School is located in Chilanga District. All the participants were registered pupils in these selected secondary schools. The sampling method for participants was purposive as it depended on choosing participants who could fulfil the purpose of this study in terms of gender, age group, and similarity in terms of psychosocial characteristics. The participants were all from grades 8-12. Their ages ranged from 13 to19 years. They were selected based on the following characteristics: (i) ownership of or access to a mobile phone, a tablet, or computer, (ii) access to the internet, (iii) basic knowledge about Covid-19 pandemic, (iv) affected by Covid-19 restrictions on movements, (v) affected by imposition of social distancing, (vi) affected by prolonged school closures, (vii) and possession of interest and willingness to participate in the study. These criteria were important for drawing participants for meaningful participation (Gundumogula, 2020). The characteristics for the inclusion criteria was based on the problem statement, research questions and objectives of the study (Adler *et al.*, 2019; Singh *et al.*, 2019) that this study is addressing which is focused on adolescent girls' engagement with mobile media to access SRHR information during Covid-19. Since the focus of this study is on adolescent girls, all the participants were girls with similar psychosocial characteristics as guided by Singh *et al.* (2019).

4.4.2 Exclusion Criteria

All the pupils who did not belong to the four selected secondary schools were excluded. From the four selected schools, apart from Kabulonga Girls Secondary School, the rest have both boys and girls as learners, but the boys from these secondary schools were left out because the study is focused on adolescent girls. The girls who did not have access to or did not own a mobile phone, tablet or computer were excluded. Girls who did not access the internet were also excluded. Additionally, girls who may have possessed or had access to a mobile phone, computer or tablet, but were not willing to participate were also excluded.

The study consisted of eight (8) focus group discussions, two per each of the selected secondary schools: Chongwe, Nakatete, Kabulonga Girls, and Mount Makulu. Six of the FGDs had 10 participants each while two had 8, and 9 respectively as the other recruited participants did not show up. With regards to how I arrived at 8 FGDs of 10 participants each, I drew inspiration from the view that the number and size of FGDs is not really settled among scholars. Some suggest a minimum of 3 and a maximum of 12 participants, while others suggest between 4 to 5 participants (Gundumogula, 2020). Other scholars further suggest between 6 and 12 participants, and yet some still suggest 6 to 8 participants (Gundumogula, 2020). Given the unsettled number and size of FGDs among scholars, I settled for 4 FGDs for junior secondary school pupils, and 4 for senior secondary school pupils of 10 participants each as guided by Nyumba *et al.* (2018). Nyumba *et al.* (2018: 23) posit that "ten participants are therefore considered large enough to gain a variety of perspectives and small enough not to become disorderly or fragmented." Therefore, each secondary school had two FGDs, one for girls from grade 8 to 9, and another for girls from grade 10 to 12. This brought the total number of participants to 80, but 3 participants did not show up, thereby bringing the number down to 77. The few participants who did not turn up were of a very small number that their absence could not have altered the findings of this study. Additionally, since participants are at liberty to show up for the FGD or withdraw from it before or during the discussions, it was not abnormal to have some participants absent. Another point worth indicating is what is captured above that some scholars suggest that 6-8 participants in an FGD is sufficient (Gundumogula, 2020). Drawing from this, the absence of 3 participants in two separate FGDs still left us within the required range to hold the FGDs as planned.

The decision to separate the juniors and seniors for the FGDs was to allow for more openness in discussions based on different age-groups in the respective grades, and the differences in their cognitive developmental levels. This is in keeping with the recommendation that participants in FGDs should be homogenous to limit undue influences in the discussion owing to differences in power and status (Sim and Waterfield, 2019). The decision to separate the juniors from the seniors was also based on their differences in their developmental stages as it is argued that adolescence is divided into 3 different developmental stages, with each of them characterised by unique cognitive, physiological attributes (Bioeth, 2015). The first developmental stage is the early stage consisting of people in the age group from 11-14; the second stage is the middle stage, and has people in the age range of 15-17 years; the last stage is the late adolescent stage whose age group

is 18-19 years old (Bioeth, 2015). In discussing the advantages of FGDs, Creswell and Poth (2018), indicate that focus group discussions yield positive benefits when interviewees are similar and cooperative with each other, when time to collect information is limited, and when participants interviewed one-on-one could be unsure to supply information. In the case of this study, senior pupils (grade 10-12) had a likelihood of dominating discussions had they been put together with juniors (grade 8 and 9) owing to their status of being in the upper bracket of secondary school and therefore could have hindered the younger ones from freely and openly supplying information. The dynamics of gender and age have a bearing on the compatibility of members in an FGD and therefore can negatively affect the outcome of the discussion especially when older children and teenagers are discussing gender sensitive issues (Adler *et al.*, 2019). Since the study focused on adolescent girls, the issue of gender separation was of no concern. What was of concern was the age differences which I took care of by having FGDs exclusive to the juniors (grade 8-9), and FGDs exclusive to seniors (grades 10-12)

The FGDs were conducted by two female moderators (research assistants). As a male researcher, all I did was to brief and debrief the participants before and after the sessions. I selected female moderators for the FGDs because I was aware that the gender of FGDs can negatively affect the discussion, therefore it is important to have a moderator of the same gender as the participants in a single gendered FGD (Adler *et al.*, 2019). I selected these two female moderators based on their experiences in collecting data via FGDs and In-depth interviews. I also considered the fact that both of them had some experience in handling secondary school learners which experience I thought would be useful in handling the selected secondary school participants by moderating the FGDs. Additionally, both research assistants have some experience in dealing with adolescents as they have been involved with teenagers and adolescents in youth ministry in their respective Catholic Parish communities within the circumscription of the Archdiocese of Lusaka. I identified these research assistants during my pastoral work when I worked as Catholic Priest in the Archdiocese of Lusaka. I worked with these research assistants in activities aimed at youth behaviour change with regards to matters of sexuality.

Having selected the two research assistants, I had three different two-hour sessions with them on three different days. During these sessions, I explained the aims and objectives of my study. I further covered areas such as the purpose of having FGDs generally, and particularly why I elected

to use FGDs for my study. I went through issues of how to conduct FGDs, explained the research questions, went through the interview guide, the consent and assent forms. Lastly, I took time to go over the literature review to enable the research assistants to understand what literature was available on the topic of study. The purpose of training the research assistants was to ensure that they understood what their responsibilities were in conducting the FGDs, and that they would carry out their responsibilities in a manner that responds to the objectives of the study in an orderly and ethical manner.

The use of two moderators provided for a division of roles that ensured a smooth flow of the discussions while at the same time ensuring the complete covering of the topics (Nyumba *et al.*, 2018). The decision to have female research assistants to moderate the FGDs was made based on my cultural fears that being an adult male who is also a Catholic Priest would prevent the female participants from engaging openly and freely during FGDs. This decision was informed by my experiences of facilitating workshops on youth behaviour change in which girls would not be disposed to freely and openly express themselves not only because I was a priest, but also because I was a male from a society that does not allow open discussions on issues of sex in groups of mixed genders.

The selection of two female moderators was deliberate to ensure that the adolescent girls participating in the study would be more open and freer to share their subjective experiences because they shared the same gender of female. This decision was positive because it elated the participants as I briefed them and told mentioned that I would not be present during the discussion, instead they would have two female moderators. At this mention, the participants relieved as they laughter and clapped, and ululated. From their reaction, I knew that the decision to have two female moderators was an appropriate one since as an adult male I could have possibly impeded the freedom of the participants to express themselves freely on a rather sensitive topic involving sexual reproductive health and rights.

Each FGD lasted between 60-90 minutes following the recommended ideal duration for a focus group discussion (Leung and Savithiri, 2009; Nyumba *et al.*, 2018). The FGDs were conducted at respective secondary schools, in the rooms that were reserved specifically for this exercise. The FGDs at Chongwe secondary school were held in the school hall, while those at Kabulonga Girls secondary school were held in the Careers and Guidance departmental office. For Nakatete

secondary school, the FGDs were held in a classroom while at Mount Makulu secondary school, the staff room was used. These venues were designated for the FGDs as they were deemed convenient by respective school authorities. Apart from Nakatete secondary school where the FGDs were held before mid-day, the other three secondary schools had their FGDs starting at 14:00 hrs in the afternoon. The language that was employed in the FGDs was English. However, given the challenges that some participants had in understanding certain concepts/words/terms in English, the moderators endeavoured to explain and/or clarify these for the participants.

The FGDs were conducted as guided by the FGD semi-structured interview guide that I designed. The semi-structured interview guide was in English. This FGD guide contained 15 open-ended questions as can be seen in Appendix III. Each FGD was audio-recorded, and notes were taken. Audio recording of FGDs and taking of notes are two of the three methods of collecting data in FGDs, the third one being participant observation (Nyumba *et al.*, 2018). In each session, two audio-recorders were used just in case one of them malfunctioned during or after the FGD sessions. This ensured some form of guarantee that the data would not be lost before transcription. Once the FGDs were concluded, I transcribed the data, after which I started the process of analysing it using reflexive thematic analysis. It was very important for the discussions to be recorded because I needed to listen to the recordings for me to capture the content of the discussion since I was not present during the discussions. This was necessary for me because I am the one who had to analyse the data. Therefore, I needed to access both the flow and content of the discussion to understand what the participants were discussing. Given the fact that data from the FGDs were audio-recorded, I transcribed it, analysed and interpreted it using an iterative process of reflexive thematic analysis by Braun and Clark (2020).

I transcribed the data manually, personally without using any software or computer-based method. As I transcribed the data, I was cognizant of the inherent challenges of transcribing data from audio to written text since the structure of the spoken language differs from the written language (Loubere, 2017). Notwithstanding such challenges, I engaged in the process of data transcription and adopted ways that could produce transcriptions that were accurate. The process of transcribing involved me listening to the audio-recordings twice before writing down the conversations verbatim. After transcribing each FGD, I listened to the recording again while reading through the

transcribed text to ensure that I had accurately captured the conversations as guided by DiCicco-Bloom and Crabtree (2006).

The purpose of transcribing the data was for me as the researcher to have the time to study the data in text form to aid the process of coding and analysis (Stuckey, 2014). The transcription of the data makes for an initial step in the process of data analysis, and therefore a critical stage in the whole process as it helps in researcher's initial familiarisation with the data (Braun and Clarke, 2006).

Given the fact that I am not the one who conducted the FGDs to collect the data I was transcribing, I gave the transcriptions to the moderators of the FGDs to go through and ascertain the accuracy of my transcriptions. Both moderators were satisfied that the transcripts were a true representation of the discussions they had with participants. This speaks to the importance of ensuring that transcripts retain the information the researcher needs and remaining true to the verbal accounts as captured in the FGDs (Braun and Clarke, 2006).

While it was a good decision to employ research assistants for data collection, I observed that this presented its own limitations, for example when I was transcribing the data, I observed that the research assistants did not probe as much on some issues during FGDs. I consider this as a limitation of using research assistants for data collection because probing skills are an important aspect of data collection, and the researcher himself/herself may know better which areas of the discussion to probe more while the discussion is in session.

4.5 Sampling

This study employed a purposive sampling method given that this sampling technique allows for the selection of participants based on their knowledge or experience, and therefore likely to bring out information that is relevant to the aims and objectives of a particular study (Etikan *et al.*, 2016; Adler *et al.*, 2019; Campbell *et al.*, 2020). I employed purposive sampling because of its suitability to inform the researcher about the research problem under study (Creswell and Poth, 2018). Since my study is a qualitative study, I found purposive sampling to be more appropriate as it is often applied in qualitative research to select people with certain characteristics that are suitable to the achievement of the objectives in a study (Ilker Etikan *et al.*, 2016). This idea is elaborated by Campbell *et al.* (2020: 653), who argue that "the reason for purposive sampling is the better matching of the sample to the aims and objectives of the research, thus improving the rigour of the study, and trustworthiness of the data and results." Indeed, I sought to match the purposive

sampling technique with the aims and objectives of my study with the conviction that this would improve the rigour, trustworthiness of the data, and results of the study.

4.5. 1 Sampling Sites for Schools

In this study, the sample comprised 4 secondary schools in 4 districts of Lusaka Province. All the selected schools are run by the government of the Republic of Zambia. Lusaka province was purposively chosen because during the Covid-19 pandemic, in 2020, it recorded the highest number of adolescent pregnancies in Zambia, estimated at 22 000 (*Lusaka Times*, Feb 26, 2021). The four districts from Lusaka Province were purposively selected because they had the greatest number of adolescent pregnancies in the province during the period of the study (2020). To arrive at the selected four secondary schools, I inquired from the Ministry of Education about which schools were more affected with teenage pregnancies during the Covid-19 pandemic. The officials at the ministry of education directed me to the DEBS Chilanga, Lusaka, Kafue and Chongwe, as the four districts that were mostly hit by teenage pregnancies. The DEBS guided me to the specific schools in their districts that were mostly affected by teenage pregnancies during Covid-19 in their districts. These four districts of Lusaka Province are: Lusaka, Chongwe, Kafue, Chilanga. While all the schools in Zambia suffered from the prolonged closures during Covid-19, the selected secondary schools for this study were reported to have the highest numbers of teenage pregnancies in the whole of Lusaka Province.

I also purposively selected Lusaka Province because it is the province with the highest prevalence of HIV infection in Zambia as it has about 340 000 people infected out of a population of about 3.2 million people (Boyd *et al.*, 2020).

The table below depicts the numbers of adolescents who became pregnant in the selected study sites in Lusaka province in 2020.

Table 4-1

District	**Number of Adolescent Pregnancy**
Lusaka	15 928
Chongwe	2 197
Kafue	1 491

Chilanga	1 299

The specific secondary schools that I purposively sampled as guided by the Ministry of Education through the DEBS, had the highest number of adolescent pregnancies during the Covid-19 induced prolonged school closures as reported by the District Boards Secretary Offices [DEBS]. For Lusaka district, I selected Kabulonga Girls Secondary School, in Chongwe district, I selected Chongwe Secondary School, and Kafue district, Nakatete Secondary School. In Chilanga district, the secondary school I selected is Mount Makulu. The Gatekeepers' letters from the respective DEBS offices are in appendix VII.

4.6 Sampling of Participants

The participants in this study were all girls from the four selected secondary schools. Girls were selected because of the high numbers of teenage pregnancies experienced during the Covid-19 induced prolonged school closures. Additionally, girls were selected as participants based on the high numbers of females among young people infected by HIV/AIDS in Zambia compared to males (Young *et al.*, 2019). For example, 5% of adolescent girls (15-19 years), and 11% of young women (20-24 years) are living with HIV, compared to about 4% of boys, and 7% of young men in the same age categories (Edwards *et al.*, 2021). From the perspective of sub-Saharan Africa, it is the girls who suffer more from SRHR challenges due to factors like; sexual partner violence, early and unintended pregnancies, STIs, and lack of adolescent friendly corners (Ng'andu *et al.*, 2022). Adolescent girls are further challenged by lack of SRHR knowledge which contributes to high levels of teenage pregnancy and STIs including HIV/AIDS (Svanemyr, 2020).

The selection of participants was done through key informants who oversee counselling and guidance in the selected secondary schools. As adolescents are considered as vulnerable participants in research and therefore care must be taken to provide them with protection from duress (Folayan *et al.*, 2015; Shirmohammadi *et al.*, 2018). For adolescents to consent without duress, care must be taken to balance their emerging autonomy and their different developmental stages; and the potential risks of participating in the research must be weighed against the potential benefits of the research (Folayan *et al.*, 2015). I took care to provide detailed information about the study to the participants, and also ensured that they were free not to participate if they chose

by explaining to them that they were not obliged to participate in the study; and that they could withdraw from the study at any point that they felt they did not wish to continue.

The key gatekeepers (Guidance and Counselling teachers), helped me to purposively choose 10 participants from the junior section and 10 from the senior section of each selected secondary school. I sought informed consent from parents, guardians and/or teachers for each participant to take part in the study (See Appendix IV). This was important and obligated in respect of research ethics protocols especially that some participants were below the age of majority which is 18 years. For the participants below the age of 18, I also administered assent forms. Both the informed consent and assent forms can be seen in appendices. The informed consent form is found in Appendix III, while the assent form is in Appendix V. These forms outlined the purpose of the study, freedom of participants to participate in the study, or to withdraw from it at any time without any consequences at all, assurance of confidentiality and anonymity, assurance of free psychosocial counselling services for any participant who would have a need for such services during or after the FGDs. While it is standard procedure to administer informed consent forms to parents and guardians who consent on behalf of the adolescents under their care, some scholars have argued that this compromises the autonomous decision-making of adolescents. For example, Folayan *et al.* (2015) posit:

> While the capacity for autonomous decision-making varies considerably across cultures and stages of adolescence it is important to consider that the involvement of parents (and guardians) in an informed consent process may jeopardize the autonomous decision-making of the adolescent, in addition to possibly compromising confidential information about the adolescent (2015: 6).

While it was necessary for me to obtain informed consent from parents and guardians of my research participants some of whom were as young as 13, not all scholars are agreed on the necessity of parental informed consent. For example, Flicker and Guta (2007) argued that obtaining parental consent for adolescents who are 14 years above is not necessary because at age 14, adolescents' cognitive capacities have developed enough for them to make informed decisions, and that their decisions do not differ from those of adults. Furthermore, Flicker and Guta (2007)

argue that adolescents' desire and willingness to participate in sexual health research might be interpreted by their parents as admission to being sexually active or having accessed sexual health services, and therefore on such basis, parents do not consent to their children to participate in sexual research which might in fact be beneficial for their adolescent sexual needs. Notwithstanding such arguments against parental consent, I had to still obtain parental consent for my participants who were below the age of 18 because according to the laws of Zambia, a person under the age of 18 is a minor, and cannot consent to participate in a study.

Studies like the current study on sexual health, or those regarding sexual behaviours and others such as on drug abuse, or those considered as taboo topics, fall in the category of sensitive topics because they have potential to arouse emotions as they might remind participants of past unpleasant or traumatic experiences, or might cause embarrassment to the participants (Shirmohammadi *et al.*, 2018). While some researchers categorise sexual topics as highly sensitive, other consider them as not more sensitive than other sensitive topics, but it is generally agreed that sexual topics are sensitive (Shirmohammadi *et al.*, 2018). Given the potential that the discussions on sexual reproductive health and rights in the FGDs could provoke some emotional reactions among participants, I took the precaution to line up psychosocial counsellors, one in each of the four districts. The counsellors were available to offer free services to any participant that was in need. These counsellors were an alternative to the teachers who ordinarily offer counselling and guidance services in each of the chosen schools. The participants were provided with this alternative in case they were not comfortable with counselling and guidance teachers in their schools whom they may have deemed as part of their authorities in the school administration, thereby constraining them from openly sharing their emotional and traumatic experiences.

4.7 Recruitment Criteria and Procedure

To conduct FGDs in the selected secondary schools, I had to acquire gatekeepers' permission from District Education Board Secretaries [DEBS]. I presented these letters to the DEBS, who in turn gave me introductory letters to the school head teachers of the 4 selected secondary schools. The head teachers introduced me to the teachers responsible for guidance and counselling, and it is these who were responsible for the recruitment of participants based on the selection criteria that I provided to them. The guidance and counselling teachers were also responsible for explaining the purpose of the study as well as ethical considerations.

In my briefing to the participants before each FGD, I took time to provide the participants with a detailed explanation of the scope of the study, and the ethical considerations. I assured the participants of confidentiality and anonymity and explained the importance of participants treating each other with respect and dignity during the discussion. The issue of confidentiality and anonymity is challenging for adolescents participating in research about sex and sexuality because while on one hand ethical protocols require that informed consent is sought from parents and guardians (which in itself has potential to violate confidentiality and anonymity), on the other hand, the researcher has an obligation to assure the adolescent participants of anonymity and confidentiality (Folayan *et al.*, 2015). Notwithstanding this dilemma, I assured the participants of confidentiality and anonymity while at the same time guaranteeing that the collected data would be protected. I also implored them to observe confidentiality when the discussions were over, and to ensure they do not share the contents of the FGDs with non-participants, especially not to mention names of who may have said this or that during the discussions. Furthermore, I explained to the participants the purpose of audio-recording the FGDs, after which I sought permission from them to use two audio recorders during the sessions.

4.8 Data Analysis

This section presents how qualitative data was analysed in this study. Qualitative data takes on different forms, which include but not limited to: excerpts from documents, interview transcripts, focus group transcripts, and field notes from observations (Bloomberg and Volpe, 2008). The qualitative data in this study is focus group transcripts since data was collected using focus group discussions. Since this section presents how qualitative data was analysed, it is important to define what qualitative data analysis is. According to Bloomberg and Volpe (2008: 96), "qualitative data analysis is the process of bringing order, structure, and meaning to the masses of data collected. Broadly speaking, qualitative data analysis is an attempt by the researcher to summarise all the collected data and in a dependable and accurate manner."

4.8.1 Thematic Analysis

This study employed reflexive thematic analysis by Braun and Clarke (2020). However, since this type of thematic analysis falls within the broader method of thematic analysis, it is important to contextualise it in the history of thematic analysis in general before getting to define it and explain how I applied it to my study. The history of thematic analysis can be traced to the beginning of the twentieth century, but heightened interest in it is attributed to Braun and Clarke through their many

publications in articles, book chapters, and their own book (Byrne, 2021). According to Braun and Clarke (2006), thematic analysis is a method of data analysis which involves identifying, analysing, and reporting patterns (themes) in the data (Braun and Clarke, 2006). This definition is retained by Braun and Clarke (2017), as they argued that thematic analysis is a method that involves the identification, analysis, and interpretation of patterns of meaning 'themes' in the collected data. As a research method, thematic analysis involves the development, analysis, and reporting of qualitative themes in the collected data (Gauthier *et al.*, 2023). Thematic analysis, according to Jirwe (2011) and Kristanto and Padmi (2020) is a commonly applied method in qualitative research, and for Braun and Clark (2008:78), "thematic analysis should be seen as a foundational method of qualitative analysis". In this study, thematic analysis allowed for the generation of codes and themes from the collected data (Braun and Clark, 2017). As a researcher, I was an active player in the creation of themes and codes from the data, cognizant of the fact that the creation of codes and themes is part of the data analysis process (Braun and Clarke, 2020). Themes do not pre-exist data analysis for the researcher to extract and apply them in his or her reporting, rather it is the responsibility and activity of the researcher and consciously and actively create themes through the process of interpretive engagement with the data (Braun and Clark, 2020). This is opposed to the idea that "thematic analysis focuses on identifiable themes and patterns of living and/or behaviour" (Aronson, 1995: 1) which seems to create the notion that themes pre-exist analysis as themes are present in the data for the research to retrieve (Braun and Clarke, 2020).

Having presented a discussion on thematic analysis in general as selected for this study, I now zero in on reflexive thematic analysis in particular, as what I applied for analysing the collected data in this study. The purpose of discussing thematic analysis in general was to locate reflexive thematic analysis within the broader frame of thematic analysis.

4.8.2 Reflexive Thematic Analysis [RTA]

There are several methods of thematic analyses, but my study specifically employed Reflexive Thematic Analysis [RTA]. Braun and Clarke (2020), argue that reflexive thematic analysis is not only distinguished as a particular form or approach of thematic analysis, but that it places significant emphasis on the subjectivity of the researcher as a resource for analysis. This position ties in with the argument that the researcher brings to the study his values, skills, experience and training (Braun and Clarke, 2020). Additionally, RTA emphasises the researcher's reflexive

involvement with the theory, data, and data interpretation (Braun and Clarke, 2020). RTA is defined as "an easily accessible and theoretically flexible interpretative approach to qualitative data analysis that facilitates the identification and analysis of patterns or themes in a given data set" (Byrne, 2021: 2).

RTA evolved over a number of years from the time Braun and Clarke's original publication in 2006 on thematic analysis [TA] (Braun and Clarke, 2020). Since this publication, Braun and Clarke admitted to leaving gaps which led to many misinterpretations in the application of thematic analysis by different scholars (Byrne, 2021). To correct the misinterpretations and provide guidance on the application of thematic analysis, Braun and Clarke came up with Reflexive Thematic Analysis [RTA] (Byrne, 2021). RTA proposes a six-phase approach that is not meant to be followed rigidly, but with the flexibility that allows the analytic process to be recursive (Braun and Clarke, 2020). The six phases of RTA are according to Braun and Clarke, (2020: 4) are: 1) data familiarisation and writing familiarisation notes; 2) systematic data coding; 3) generating initial themes from coded and collated data; 4) developing and reviewing themes; 5) refining, defining and naming themes; and 6) writing the report. I subjected the collected data to this six-phased approach albeit not in a rigid but flexible manner because of the iterative nature of the analysis process.

This study employed RTA to provide a profound understanding of the perceptions and experiences adolescent girls in their engagement with mobile media as they searched for information on SRHR during Covid-19. In employing RTA, I followed the inductive approach where data coding and analysis followed a "bottom up" approach and was driven by the content of the data. This meant that codes and themes were created from data content for what was mapped out to closely match with what was contained in the data (Braun and Clarke, 2012). Since the inductive approach has the constructed themes grounded in the collected data, the themes carry little similarity with the questions the participants were asked during the FGDs (Braun and Clark, 2006).

I selected thematic analysis for this study based on its accessibility and flexibility in analysing data (Braun and Clarke, 2012). This flexibility relates to the research questions, sample size and constitution, data collection and method, and approaches to meaning generation (Braun and Clark, 2017). Furthermore, thematic analysis is flexible owing to the fact that it is not tied to any specific theoretical or epistemological approach, and does not have any correct particular way of

conducting it, but has several versatile guidelines of how to approach it, hence its applicability to any theoretical or epistemological approach (Braun and Clarke, 2006, Gauthier, 2023). While flexibility has been given as one of the strengths of thematic analysis, some thematic analysis scholars have argued that this flexibility could actually be a disadvantage or weakness because it can be a source of inconsistency and incoherence during the process of generating themes from the data (Nowell *et al.*, 2017). Such a disadvantage can be addressed by ensuring the explicit application of an epistemological position that supports the empirical claims of the study (Nowell *et al.*, 2017). In this study, I have applied an epistemological position as explained in this chapter in the section that discusses the study design.

In applying reflexive thematic analysis to this study, as a researcher I was actively involved in all the six phases that Braun and Clarke (2020) espouse, and this demanded that I exercise flexibility and reflection in the whole process of analysis through active engagement with the data. For example, in phase 1: the process of familiarising myself with the data did not start after the data was transcribed, but during the process of data transcription from audio to text as espoused by Braun and Clarke (2006). In this case, for me, the process started with the verbatim transcription of the recorded data. As already indicated, I personally transcribed the recorded data as a way of familiarising myself with it. This is in line with the guidance of Creswell and Creswell (2018:96) who contended that: "although extremely tedious, transcribing your own interviews is one way of immersing yourself in your data and becoming more familiar with it." In addition, it is worth noting that: "doing your own transcriptions, or at least checking them by listening to the tapes [recordings] as you read them, can be quite different from just working on the transcriptions done by somebody else" (Creswell and Creswell, 2018: 96). Following this counsel, I also found myself going to the transcribed data back and forth to familiarise myself more and more with the data. In the process, I was noting down some ideas that struck me as common or related.

In phase 2, I generated preliminary codes from the data I had transcribed. I did this manually and the codes were informed by the patterns that I had identified in the transcribed data. This process followed the guidance of Braun and Clarke, that:

> within reflexive TA, the coding process is integral to theme development, in the sense that themes are an 'outcome' of these coding and theme development processes, are developed through

> coding; coding is not – in general – a process for finding evidence for pre-conceptualised themes. The analytic process involves immersion in the data, reading, reflecting, questioning, imagining, wondering, writing, retreating, returning (2020: 5).

This guidance was crucial in helping to generate preliminary codes that struck me as interesting, and those that bore relationships of similarity. The ideas that I found interesting or sharing similarities were coded in relation to the objectives of the study, the research questions as well as the two theories: SDT and PCT which support this research. This was not a linear process because I had to read the transcribed data many times, and also listened to the recordings several times to check if I had captured the ideas accurately, and be certain about the relationship between ideas.

In phase 3, I reread the codes and further examined them to construct/generate initial themes as guided by Braun and Clarke (2020). This involved going back and forth to the codes to ensure that the themes resonate with the codes, and this is consistent with the counsel offered by Braun and Clarke (2006). In addition, I would go back to the collected data (transcribed as well as audio) to ensure that the themes I constructed/created spoke to the research questions. Ensuring the relationship of themes to research questions is as guided by the position of Braun and Clarke (2006: 10) as they hold that "a theme captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set."

As I engaged in the process of theme creation from codes, I was conscious of the fact that while other thematic analyses approaches use themes and codes interchangeably, RTA distinguishes them (Braun and Clarke, 2020). According to Braun and Clarke, in RTA, a code is conceptualised as an analytic unit or tool, used by the researcher to develop (initial) themes. Here, codes can be thought of as entities that capture (at least) one observation, display (usually just) one facet; themes, in contrast, are like multi-faceted crystals – they capture multiple observations or facets (2020:13). Indeed, codes identify patterns [themes] running through the entire dataset in connection with the research questions (Braun and Clarke, 2014).

The creation, generation or construction of themes from the collected data was my activity as a researcher since it was my responsibility to do so knowing that themes do not pre-exist in the data, nor do they exist independent of the researcher (Braun and Clarke, 2013; Braun and Clarke, 2020). If themes were to exist in the data, this would take away the activity of the researcher as an active

player in identifying patterns/themes in the collected data (Braun and Clarke, 2006). Since themes do not exist independent of the researcher, the process of theme-construction is not devoid of the researcher's values, skills, experiences and training (Braun and Clarke, 2020). For this reason, my training, experiences, beliefs, cultural and religious dispositions were not avoided in the process of manually constructing themes from the collected data.

In phase 4, I developed and reviewed themes according to Braun and Clarke (2020). I paid attention to the research questions and objectives of my study in relation to the constructs of the two theories that I selected for this study as is captured in Chapter Three. I developed the themes manually since I constructed the initial ones manually. The manual construction of themes has both proponents and critics. For example, Kristanto and Padmi (2020) have criticised manual theme construction as possessing potential flaws because, for them the researcher's influence can bring bias to the themes, thereby affecting the accuracy of the captured data. A rebuttal against such criticism is found in Braun and Clarke (2013: 6), who hold that the researcher's influence in constructing themes is an asset that should be embraced. A further criticism of the construction of themes manually is that it is very time consuming and impractical, therefore affects the timing of the dissemination of findings to both stakeholders and society (Kristanto and Padmi, 2020). This weakness can be addressed by using computer software to construct themes (Kristanto and Padmi, 2020). However, the use of computer software does not perfectly address the weakness of time consumption which is present in manual theme construction. Computer software presents its own weaknesses in that computers lack the ability to make sense of the data in relation to context and further possess the possibility of disregarding important themes (Kristanto and Padmi, 2020). From these two positions that expose the weaknesses of constructing themes either manually or using a computer, it can be concluded that there is no single method that is completely devoid of disadvantages or weaknesses. For this reason, what is important is to find ways of mitigating against the weaknesses present in the selected method to be applied in constructing themes. I went about mitigating against the weaknesses of constructing themes manually by appreciating the researcher's influence not as a weakness but a strength by following the argument of Nowell *et al.* (2017: 7) that a "researcher becomes the instrument for analysis, making judgments about coding, theming, decontextualizing, and recontextualizing the data."

In phase 5, I refined, defined and named themes according to Braun and Clarke (2020). The final themes became the basis for the findings, and eventual analysis. The process of refining, defining and renaming themes was always in relation to the research questions, research objectives and the two theories selected provide a theoretical framework for this study.

In the final phase which is phase 6, I wrote the report, detailing the findings of the study.

4.8.3 Reflexivity

Whereas quantitative studies endeavour to free the researcher's subjectivity, qualitative studies depend on researcher subjectivity, and this referred to as reflexivity (Olmos-Vega, Stalmeijer, Varpio and Kahlke, 2023). In qualitative research, reflexivity involves the:

> researchers' ability to make and communicate nuanced and ethical decisions amid complex work to generate real-world data that reflects the messiness of participants' experiences and social practices. In other words, their subjective perspective or "bias" is fundamentally intertwined with qualitative research process (Olmos-Vega, Stalmeijer, Varpio and Kahlke, 2023: 241).

In this qualitative study, as a researcher, I made nuanced judgements that depended on my reflexivity. For example, construction, development and analysis of themes was influenced by my epistemological position which is informed, and influenced by my subjective views (historical, values, perspectives, experiences) which are steered by both my theoretical framework and the literature review. My construction of reality in this study was based on the outcomes of the research process which purposely drew participants from four selected secondary schools in Lusaka, Zambia. The construction of knowledge in this study was a process that involved both the participants, and I, as a researcher because together we were actively engaged in capturing the subjective experiences and perceptions of the participants (Walsh *et al.*, 2014: 81) in their use of mobile media for accessing information on sexual reproductive health and rights during Covid-19. My subjective views as a researcher also played a role in my construction of reality since "in the qualitative paradigm, research is understood as a subjective process; we, as researchers, bring our own histories, values, assumptions, perspectives, politics and mannerisms into the research- and we cannot leave those at the door" (Braun and Clark, 2013: 36). In this study, as a researcher,

I viewed the world through the experiences and perceptions of the participants (Thanh and Thanh, 2015) as shared in the collected data while at the same time not taking off my subjective lenses.

I enjoined to the subjective experiences and perspectives of participants in this study, my world view, passions, political and religious orientation as an adult Zambian male to be a part of the qualitative research process since qualitative research considers the subjectivity of the researcher as an asset rather than a liability (Braun and Clarke, 2013:6). Braun and Clark (2013), argue that researcher's views, passions, politics, as lenses through which they see the world [and interpret it] are all regarded as part of the research process and are valued thus. Indeed, as I sought for answers for this research, I employed the interpretivist and constructivism paradigms which enabled me to utilise the experiences and perspectives of my participants to construct and interpret my understanding of the data collected (Thanh and Thanh, 2015) through focus group discussions.

4.9 Ethical Considerations

In the recent past, there has been heightened attention given to the rights of children and young people in view of their participation in research as active research agents (Ruiz-Casares and Thomson, 2016; Goodyear *et al.*, 2019). Such developments are a reflection of the attitudinal changes championed by the United Nations Convention on the Rights of the Child (Ruiz-Casares and Thomson, 2016), as stipulated in article 12:

> States Parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, views of the child being given due weight in accordance with the age and maturity of the child (United Nations, 1989).

In respect of the Rights of a Child as enshrined by the United Nations Convention on the Rights of a Child, I ensured that I obtained assent and informed consent from my participants after making them understand the purpose of the study and their rights to participate or not to participate in the study. While the United Nations guarantees the rights of the children to have their views freely expressed and listened to, children do not cease to be vulnerable, and therefore, researchers and gatekeepers must ensure their protection from harm, exploitation and manipulation (Ruiz-Casares and Thomson, 2016). In keeping with the need to respect the guaranteed rights of children to freely express themselves and to be listened to, while at the same time protecting them from harm,

manipulation and exploitation, I undertook to obtain ethical clearance for me to collect data for my study. This was necessary because my study involved adolescent girls, the majority of whom were below the age of 18. Below, I outline the process I followed to obtain ethical clearance for my study.

For me to collect data, I needed to obtain ethical approval from the University of KwaZulu-Natal. I obtained the ethical clearance from the Humanities and Social Sciences Research Ethics Committee [HSSREC] at the University of KwaZulu-Natal. This ethical approval is contained in a letter bearing the Protocol Reference Number: HSSREC/00004311/2022 (Appendix VI). To receive ethical approval from HSSREC, I submitted gatekeepers' permission letters from the District Board Education Secretaries [DEBS] which indicated that I was permitted to collect data from the selected secondary schools in their districts. I obtained gatekeepers permission in keeping with ethical principles and practice in research since gatekeepers are key to a researcher's access to research participants as well as research sites (McFadyen and Rankin, 2016). In the case of my study, I could not have gained access to the four selected secondary schools, and to the participants without the explicit permission of the DEBS. The DEBS as gatekeepers have the responsibility of not only protecting the participants' interests, but also the interests of the institution they represent by ensuring that ethical guidelines are adhered to (McFadyen and Rankin, 2016).

Given that my study was dealing with adolescents as participants, I had to ensure the availability of psycho-social counsellors in case participants would experience emotional reactions from conversations that could possibly evoke past traumatic experiences. To this effect, I submitted letters to HSSREC from four psycho-social counsellors who offered to provide free psychosocial counselling services to participants who may have needed such services. Other documents I submitted to HSSREC to obtain ethical approval were the informed consent forms, guardian/parent informed consent form and assent forms. I had to submit these documents to demonstrate that I was not going to coerce or force any participant to be a part of my study against their will as human participants in research (Sim and Waterfield, 2019). Indeed, consent and assent are fundamentally important in view of participants' autonomous decisions to take part in the study and are a way of protecting the autonomy of the participants (Sim and Waterfield, 2019).

The consent and assent forms for my study adhered to the demands of what is needed for consent to achieve its intended purpose as explained by Sim and Waterfield (2019), who point out that

there are four fundamental features consent must have for it to fulfil its intended moral force: (i) disclosure- sufficient information given to the participant by the researcher, (ii) Comprehension- how much the participant understands the information from the researcher, (iii) Competence- the participant's possession of capacity to grant or deny consent, (iv) Voluntariness- devoid of force or coercion. Rather than having parents and guardians exclusively consent on behalf of the adolescent participants, it was important for the adolescents themselves as participants in the study to consent and assent to participate given that they were what Goodyear *et al.* (2019), refer to as active agents in the research. I took time to share information and explain the aims and objectives of my research and how the autonomy of my participants was assured. This was in keeping with the demand that "For children to properly understand the research activities in order to consent to participation, information needs to be provided in ways that are appropriate to their age, competencies, and cultural context" (Ruiz-Casares and Thompson, 2016: 36). Apart from sharing information about my study and highlighting issues of voluntariness, confidentiality, and autonomy as contained in both the consent and assent forms, additional information is in the participant information sheet as contained in Appendix II. The participants were allowed time to ask various questions concerning the study, and this was important for me to appreciate that my participants understood what they were deciding to participate in.

With the ethical approval letter from HSSREC in my hands, I went back to DEBS, who then gave me introductory letters to the selected schools to meet the respective Head Teachers. The Head Teachers introduced me to the teachers in charge of careers and guidance for purposes of participant recruitment. I took time to explain to the careers and guidance teachers about the aim and objectives of my study, and their role in recruiting participants for FGDs. I further explained to them about both the inclusion and exclusion criteria to be observed during the recruitment process.

On the need for the participants to either verify my authenticity as a bona fide PhD candidate at UKZN, or to seek further clarity on the study, I invited them to feel free to contact my supervisor, Prof. Sarah Gibson, and/or the chairperson of the UKZN Humanities and Social Sciences Research Ethics Committee. To this end, I provided the participants with the necessary contact details as captured in the appendices.

The selected participants for the study were a mixture of students who had attained the age of majority (18), and those who were still below this age. Given this mixture, I sought parental/guardian consent for those below the age of 18 (and these were the majority), and informed consent for those who were 18 years or more. For those below the age of 18, I further sought their assent through the assent forms that I provided to them. It was important for the participants themselves to consent or assent to participating in the study as explained above because they were the active agents of research, and their rights as individual participants (Ruiz-Casares and Thomson, 2016; Goodyear, 2019) had to be acknowledged and respected. Additionally, the participants under the age of 18 have their right to freedom of expression enshrined in article 13 of the United Nations Convention for Children's rights: "The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice" (United Nations, 1989, Article 13). This provision underscores the importance of the child's individual freedom for self-expression using the manner of their choice without having to seek the permission of adults (Skelton, 2008). This position notwithstanding, I still needed to get parental/guardian consent because it is a necessary requirement by UKZN's HSSREC for any researcher who wishes to conduct research with children under the age of 18. However, Skelton (2008), argues that such a requirement is a contravention of the provisions of the UN Convention on Children's Rights especially that the research is based on the situations the children have experienced and formed opinions and perceptions about., and not the experiences, opinions and perceptions of their parents and guardians.

While I agree with the position of Skelton (2020), I still hold the position that children are vulnerable and need to be protected from manipulation, and exploitation from researchers, and for this reason, parental/guardian consent is necessary (Ruiz-Casares and Thomson, 2016). Additionally, I hold the position that adolescents are vulnerable, and do not possess enough capacity to provide informed consent because they are still inexperienced in life, still developing their cognitive skills all of which are influenced by contextual factors such as poverty and education (Ott *et al.*, 2010). When adolescent vulnerability has been considered, it is the parents who are better placed to understand their adolescent children's vulnerability, and therefore in a

better position to provide informed consent on behalf of their children. With this position in mind, I proceeded to acquire parental/guardian consent.

The assent and informed consent forms highlighted and underscored important aspects of the process of data collection through FGDs such as: anonymity of the participants, confidentiality, and the autonomy of the participants to stay or exit the study as and when they chose, the right not to respond to questions they deemed discomforting. Additionally, both the informed consent and assent forms contained an invitation to participants who wished to access psychosocial counselling to feel free to access such services from selected professional psychosocial counsellors whose services were available free of charge. I explained to the participants that they could access the counselling services during or after the FGDs. The informed consent and assent forms are presented in the Appendices IV and V.

As a way of helping my participants to adequately comprehend the nature and objectives of my study, I took time to explain to them some terms and concepts that I thought might be a bit difficult to understand especially for those in grades 8 and 9. For example, I explained terms such as mobile media, co-producer, consumer of information, and digital innovations. Before I undertook the exercise of meeting with the participants, I had already taken note of some of the terms and concepts that I thought would be a bit difficult for some students to comprehend. I consulted some experts who teach Bemba and Nyanja (commonly used languages in Lusaka) to translate and provide brief explanations of some of the terms and concepts. The need for a translator in research "A translator plays a very important role in the production of data and therefore who undertook the translation needs to be accounted. This is because, underpinning these choices is the ontological. and epistemological stance of the researcher" (Qoyyimah, 2023: 5). The production of data in the case of this study was done in English, but participants were allowed to express themselves in Bemba or Nyanja whenever they had difficulties to express certain things in English. As a researcher I made the choice to engage experts in Bemba and Nyanja, as I needed a second input on translation and/or explanation of concepts and terms from the experts to reduce the risk of altering the terms or concepts employed in the study. My fluency (written and spoken) in both Bemba and Nyanja is excellent as I have since secondary school translated scripts and speeches from English to any of the two languages and vice-versa. I have also done work as an informal interpreter from English to Nyanja and/or Bemba at functions such as workshops, seminars,

weddings and funerals. However, I felt that having others also provide their translation would help to sharpen the understanding of some of the difficult terms and concepts. With this background, I had no difficulties responding to participants who sought clarification on some issues and needed this given in either Bemba or Nyanja.

CONCLUSION

This chapter discussed how I employed purposive sampling to select the location of the study, the four secondary schools, and the study participants. It further discussed both the inclusion and exclusion criteria in the selection of study participants. It outlined the path I took to collect data through FGDs from: Nakatete, Kabulonga Girls, Chongwe, and Mount Makulu Secondary Schools. Furthermore, the chapter explained my positionality and reflexivity as a researcher in terms of my involvement in data analysis and writing of the report. Given that this study is dealing with adolescents, a section of society considered as vulnerable, I had to obtain ethical clearance to undertake this study, and the process of obtaining ethical is duly acknowledged in this chapter. Additionally, the chapter outlines the process of obtaining assent as well as informed consent for study participants.

5.0 DATA MANAGEMENT AND DATA ANALYSIS

5.1 Introduction

In this chapter, I discuss how I analysed the data from the 8 FGDs conducted in the selected four secondary schools, namely: Kabulonga Girls, Nakatete, Chongwe, and Mount Makulu. The data was collected between 2 March and 6 April 2023. I present and analyse the data based on the themes I constructed following the six phased approach in reflexive thematic analysis as presented by Braun and Clarke (2020): 1. Researcher familiarisation with collected data; 2. Generating Initial Codes; 3. Searching for Themes; 4. Reviewing Themes; 5. Defining and Naming Themes, 6. Report Writing.

After the data was collected through FGDs, transcribed, and arranged based on codes which set the stage for the creation of themes from the coded data as guided by Braun and Clarke (2020). I constructed themes through the process of collecting, comparing, and arranging relevant codes as espoused by Kristanto and Padmi (2020). These patterns were drawn from either direct quotations or paraphrased common ideas (Aronson, 1995). The themes which I constructed from the qualitative data created a framework for me as a researcher to organise and report my observations (Braun and Clarke, 2017). The steps I took in conducting thematic analysis are outlined below in the description of how I applied the six steps/phases of reflexive thematic analysis by Braun and Clarke (2020).

I constructed/created themes based on how they seemed to answer the research questions. Some themes, though related to the study, may not necessarily directly be responding to the research questions, but are a representation of the conversations of the participants about the means through which they acquire SRHR information and knowledge from their cultural settings. These themes are important to the study as they underscore the reality that while adolescents are avid users of mobile technologies, they still retain their cultural ways of acquiring SRHR information. Additionally, the themes that are not mobile media specific, demonstrate that while adolescents employ mobile media to access SRHR information, they carry with them the influence of other sources of SRHR information and knowledge which creates an interplay between such sources and mobile media sources. As shall be seen in the analysis of these themes, there is a back and forth in terms of searching, confirmation and sharing of the SRHR information adolescents acquire from various sources both online and offline.

I now outline how I utilised reflexive thematic analysis in analysing data for this study according to Braun and Clarke (2020; 2006). Braun and Clarke (2020; 2006) outline six recursive phases as they guide on how reflexive thematic analysis should be employed in qualitative research.

5.2 Phase one: Familiarisation with Collected Data

The first phase involves the researcher's familiarisation of self with the collected data through reading and re-reading of the data while making initial notes (Braun and Clarke, 2020; Braun and Clarke, 2006). In a similar way, Nowell *et al.* (2017) posited that the first step of thematic analysis requires the researcher to actively and repeatedly read the data to become familiar with it while searching for meanings and patterns. As I employed thematic analysis for this study, the process was not linear since this method of qualitative analysis is recursive, and demanded of me as a researcher to actively and repeatedly read the data to produce codes from which eventual themes were constructed/created and refined in view of the context of my study to integrate my experiences and practical knowledge as a researcher (Gauthier, 2023). For this study, while I utilised this first phase in familiarising myself with the data, strictly speaking, it was not the initial step I took in my data analysis. My initial step in familiarising myself with the data was listening and transcribing the FGDs since the FGDs were conducted by my research assistants. As I listened to the audio recordings multiple times and transcribed the data, I became familiar with the data, and this is also a part of the data analysis process as guided by Braun and Clarke (2006) and Creswell and Creswell (20218). I transcribed the data *verbatim* since I wrote down exactly what each participant said in the words that were said as I wanted to ensure that nothing that was said was lost in the process of transcription. Having transcribed the data, I read and re-read the scripts while at the same time noting some ideas for the coding process (Braun and Clarke, 2006).

5.3 Phase two: Generating Initial Codes

In this phase, the researcher theorises about the data, going back to the data, reflecting and interacting with the data to give himself/herself a chance to pay attention to particular features of the data (Nowell *et al.*, 2017). The generation of initial codes followed the process of reflexive thematic analysis as guided by Braun and Clarke (2020: 13) in which "a code is conceptualised as an analytic unit or tool, used by the researcher to develop (initial) themes. Here codes can be thought of as entities that capture (at least) one observation, display (usually just) one facet."

Once I had familiarised myself with the data, and having taken down some initial notes and ideas, I went into this second phase to generate initial codes as guided by Braun and Clarke (2020; 2006). I personally did the coding manually, and I used different colours to highlight interesting aspects, words, ideas, and phrases that eventually formed repeated patterns across the data set (Braun and Clark, 2006). I coded manually cognizant of the reality that "although computer programs may be helpful to organize and examine large amounts of data, none are capable of the intellectual and conceptualizing processes required to transform data, nor can they make any kind of judgment" (Nowell *et al.*, 2017: 7). As a researcher, I made judgements and decisions in the coding process as an active player as opposed to being passive (Braun and Clarke, 2020). The process of coding was not a one-way process, as I had to move back and forth across the data set in an iterative manner during which process, I coded for as many themes as possible, although some codes did not make it to the actual themes that I generated.

Coding for as many themes as possible, is consistent with the guidance given by Braun and Clarke (2006), and Nowell *et al.* (2017) who guide that a researcher should code for as many potential themes as possible while remaining conscious that at this stage of analysis one might not know what could later turn out to be of interest. This phase of generating initial codes is essential in the process of developing themes, and demands of the researcher to be engrossed in the data: reading, reflecting, questioning, imagining, wandering, writing, retreating, and returning to the data. Similarly, coding is the process by which the researcher engages with the data while reflecting and thinking about the data (Nowell *et al.*, 2017). I engaged in an inductive coding process since I was not testing any theory as is the case in the deductive process (Braun and Clarke, 2006). Additionally, the inductive process of coding was necessary because the eventual themes analysed in this study were data driven Braun and Clarke, 2020). As I engaged with the data, reflected and thought about the data during the coding process, the codes I generated were in the form of texts, phrases, and words (Aronson, 1995). I generated the initial codes in respect of the theoretical framework employed in this study. It should be noted that while all the generated initial codes are individually driven by participatory culture theory and self-determination theory respectively, some codes are actually intersectional. This means that they are driven by both theories. Table 4.2 presents the initial codes informed by the theoretical framework.

Table 4.2

Initial Codes Driven by Theoretical Framework	
Participatory Culture Constructs: Networked Publics, Convergence Culture, Spreadable Media	**Social Determination Theory Constructs: Autonomy, Relatedness, Competence**
Codes	**Codes**
Accessing SRHR information	Sexually transmitted infections including HIV
Researching for SRHR information via mobile media	Rape
Accessing information from Google and Instagram	Abortion
Accessing information via mobile gadgets	Defilement
Accessing information on the internet	Menstrual hygiene
Accessing information easily online	Teenage pregnancy
Research for SRHR information online	Early marriages
Sharing information with friends	Keeping your virginity till marriage
Acquiring knowledge	Abstinence
Sharing with peers	Avoiding casual sex
Tell my friend	Keeping your virginity till marriage
Educate my friends	Sharing information with friends
Share at home	Acquiring knowledge
Sharing information with family	Sharing with peers
Sharing information with friends via phone	Prevention of STIs
Getting information from friends	Prevention of teenage pregnancy
Accessing information through friends	Sharing knowledge with others
Sharing information with family and friends	Personal menstrual hygiene
Shared the knowledge I had gained	Discussing with friends
I don't have a phone	Sensitizing peers
I have to ask for a phone	Teaching others
Used my mother's phone	Learning
Used my sister's phone	Asking for advice
I rely on people with phones	Sharing information with family and friends
I used my aunt's phone When I write my exams, I will have a phone	Shared the knowledge I had gained
Dad promised me a phone when I complete secondary school	Using mobile media is like having a private conversation with yourself
My parents will buy me a phone whether they like it or not	Searching for SRHR information on mobile media is private
I will be saving money I am given for lunch so that I buy my own phone	No need to be shy because nobody is seeing you
	Google can't look down upon you
	Google will keep secrets, but people will share what you ask them
	Mobile media is private

I am buying a phone no matter what my parents think	I am not always good at interacting with people in person
My dad has to buy my first phone when I finish school	Not comfortable to talk to my mother about certain things
I will be banking so that I buy my own phone	On mobile media, you are the only one who knows what you are searching about
I will be banking money to buy my own phone	If you have a mobile media device, it is always available to you, unlike relying on people for SRHR information
I plan to tell my parents to buy me a phone	Free on mobile media
I still do not have a phone until I write my exams	Mobile phones help us to get information privately
Google	I am introverted
Facebook	Openness to share SRHR information through Social-networking sites
YouTube	No one can see me
WhatsApp	“I wasn’t able to feel shy or suffer in silence”
TikTok	Not being given the phone because I don’t help with bundles
Using mobile media is like having a private conversation with yourself	Unable to access internet when you don’t have bundles
Searching for SRHR information on mobile media is private	Bundles are expensive
No need to be shy because nobody is seeing you	With google, I use a lot of bundles
Google can’t look down upon you	YouTube consumes a lot of bundles because of videos
Google will keep secrets, but people will share what you ask them	Facebook can be accessed without bundles
Mobile media is private	Pinterest also works without bundles
I am not always good at interacting with people in person	Bundles finish very fast
Not comfortable to talk to my mother about certain things	Have to ask for money for bundles
On mobile media, you are the only one who knows what you are searching about	My sister would tell me to buy bundles if I had to use her phone
If you have a mobile media device, it is always available to you, unlike relying on people for SRHR information	Sister complaining about her bundles finishing
Free on mobile media	Lacking bundles
Mobile phones help us to get information privately	You cannot access SRHR information on mobile media if you don’t have bundles
I am introverted	Look for money to buy bundles
Openness to share SRHR information through Social-networking sites	Using money meant for food to buy bundles
No one is able to see me	Mobile media will not lie to me
	You learn things your parents cannot tell you
	Mobile media doesn’t use riddles

“I wasn’t able to feel shy or suffer in silence”	Variety of information
Cyberbullying	Has a lot more information than from friends.
Using abusive language	People will not tell you everything, but mobile media does
Insulting you	
People lowering your confidence	People cannot explain things the way social media does
People talking bad at you	
Being looked down upon	Open to my grandmother
Responding rudely	When my grandmother is around, I go to ask her
Verbally abused	
Lower your self-esteem	Aunt told me
Mock you	My sister told me
Discourage you	My mum told me
Could not post anything on Facebook because I was using someone else’s phone	I was told by my mother
	My mum and grandma told me
Most people on these sites are local people you stay with within the same communities	I would go to my mother
	I go to my mother, and she explains
Being discussed by community members	I asked my grandma
Being bullied by community members	My mother is always talking about SRHR issues
Using someone’s Facebook account	
Using someone’s phone	When I told my mum about my first menses, she told her elder sister
Easy access to information	
Learn a lot	Female teachers
Quick answers	School matrons
Detailed information	Old tradition, I do not want to practice it
More information	Our culture is slowly fading
Getting more information	A long time ago, culture was very strong
Sharing information	Today, parents are too busy to sit down with their children
Gathering information	
Full information	Information from culture is exaggerated
Updated information	Mobile media never brought me anything from our tradition and culture, these we get from our grandmothers
Different types of information	
Learning more	
Knowing more	You feel uncomfortable to ask your mother about SRHR, but on the internet, nobody is going to be watching you
Extensive information	
Gives you more views and opinions	
Direct information	It is easy to access information from Google than from parents
Does not leave out details	
Deep information	Google knows everything
Explains things in a logical manner	Google knows a lot of things
A lot of information	

Immediate responses Gives correct answers "Parents would be asking you why you want SRHR information, but mobile media will not ask" Mobile media will not lie to me You learn things your parents cannot tell you Mobile media doesn't use riddles Variety of information Has a lot more information than friends People will not tell you everything, but mobile media does People cannot explain things the way social media does Posts, too deep for young people Adult content Inappropriate content Fake information Wrong information Not all information is correct Irrelevant information Too many adverts Irrelevant stuff Sometimes leads to pornographic videos False information Gives you more information beyond your age Does not always provide the information you need Leads to watching pornographic movies Sometimes people on social media give conflicting answers. Bundles finish very fast Have to ask for money for bundles My sister would tell me to buy bundles if I had to use her phone Sister complaining about her bundles finishing Lacking bundles You cannot access SRHR information on mobile media if you don't have bundles Look for money to buy bundles	Google is better because it gives you different views from different people Google gives information from different people Our culture is fading away, and many people will not be told things by their parents, you google for information Gives you information from people who have been in different situations. Gives you views from different people, not only in Zambia Parents are busy, and children don't want to ask, so mobile media helps a lot Google gives a better understanding Google has a wide range of information Google answers in detail and gives examples Putting you in seclusion when you come of age is old tradition Come of age Keep my body clean The time I came of age When I came of age My grandma and my mum sat me down when I came of age When I became of age How the body changes when you come of age When I reached sexual maturity, mum sat me down When you come of age, you should abstain from sleeping with boys "When I came of age, my mother told me not to be found with boys anyhow because I would get pregnant" Puberty stage When I reached menstruation, was told not to have much interaction with boys When I came of age, my mother told me that I shouldn't have boyfriends When you have sex, you become pregnant

Using money meant for food to buy bundles	When I reached menstruation, they told me that I should not be hanging with boys
I had a challenge to buy bundles because I don't work	You have come of age, sleeping with a boy is bad, you will get pregnant
Asking for money for bundles	Now that you are menstruating, you are not supposed to cook
No bundles	You are not supposed to put salt in food
No talk time to make bundles	When menstruating, a girl is not supposed to eat food with salt
Not being given the phone because I don't help with bundles	Gives me things easily than my parents
Unable to access internet when you don't have bundles	It is faster
Bundles are expensive	Does not use riddles
With google, I use a lot of bundles	Goes straight to the point
YouTube consumes a lot of bundles because of videos	Google gives me more on what I want
Facebook can be accessed without bundles	I searched on Google, and it gave me answers
Pinterest also works without bundles	I went to Google
Slow network	Google is worldwide
Zamtel Network is very slow	Read something on Google
Poor Network	Gathered information from Google
Network time-out	Google will know any question
Network is problematic	I prefer using Google
No network	Google gives me correct answers
Bad network	I feel Google is better because friends sometimes give wrong answers
Cannot understand what it brings	When you ask Google a question, it will bring the answers
Uses big words that you don't understand	Google is fast, it will bring you answers immediately
"The English that Google brought, up to now I don't even know what it means"	Learnt a lot from Google
Google gives me more on what I want	Google does not provide emotional support
I searched on Google, and it gave me answers	Resorting to Google to verify information
I went to Google	I can get more advanced knowledge than from peers and family
Google is worldwide	People's knowledge is limited compared to google
Read something on Google	Parents do not go into details, but google does
Gathered information from Google	Some parents don't know the full details, but google will give you the information you need
Google will know any question	Learn more from Google
I prefer using Google	
With Google, mostly you get professional opinions	
Google tells you things directly, grandmothers tell you things indirectly	

I am more open to Google than to my family members	Almost having a private conversation with Google
You feel uncomfortable to ask your mother about SRHR, but on the internet, nobody is going to be watching you	People instructing you when you come of age, use proverbs, but Google helps you to understand things
It is easy to access information from Google than from parents	Google goes deeper unlike word of mouth
Google knows everything	Google gives you a lot of information
Google knows a lot of things	With Google, mostly you get professional opinions
Google is better because it gives you different views from different people	Google tells you things directly, grandmothers tell you things indirectly
Google gives information from different people	I am more open to Google than to my family members
Our culture is fading away, and many people will not be told things by their parents, you google for information	You feel uncomfortable to ask your mother about SRHR, but on the internet, nobody is going to be watching you
Gives you information from people who have been in different situations.	It is easy to access information from Google than from parents
Gives you views from different people, not only in Zambia	Google knows everything
Parents are busy, and children don't want to ask, so mobile media helps a lot	Google knows a lot of things
Google gives a better understanding	Google is better because it gives you different views from different people
Google has a wide range of information	Google gives information from different people
Google answers in detail and gives examples	Our culture is fading away, and many people will not be told things by their parents, you google for information
Google might not give you truthful information on traditional things	Gives you information from people who have been in different situations.
Disadvantage of Google, it brings a lot of adverts	Gives you views from different people, not only in Zambia
Google might not have everything, but at least you find something	Parents are busy, and children don't want to ask, so mobile media helps a lot
Disadvantage with google, it goes too far, brings you something else	Google gives a better understanding
Google brings advanced words which you don't even understand	Google has a wide range of information
	Google answers in detail and gives examples

5.4 Phase three: Searching for Themes

Once all the data has been coded and collated, and a list of codes has been produced, the stage that follows requires the researcher to sort out the different codes into potential themes (Braun and Clarke, 2006; Nowell *et al.*, 2017). A theme expresses or represents something salient in the data in connection with the overall research question, and in searching for and generating themes, the researcher has to be flexible because rigid rules do not work (Braun and Clarke, 2006). Aronson, (1995) reiterates the importance of the researcher (analyst) in the process of theme identification. He argues that it is the responsibility of the analyst to piece the ideas together in a coherent manner because it is he/she who would have conscientiously studied how these different parts and pieces in the data can fit together when combined. In arguing for how themes are identified, Aronson (1995) posited that themes are identified by assembling parts or pieces of ideas or experiences which are frequently incomprehensible when considered alone. Hence in searching for themes in the data, I was conscious of the reality that ideas that I had formed in the coding process would not necessarily be meaningful in their individual capacities unless viewed together with others in relation to the overarching research question (Braun and Clarke, 2006; Nowell *et al.*, 2017).

Given the fact that the thematic analysis employed in this thesis is data driven, the themes did not resemble the specific questions that the participants were asked during FGDs (Braun and Clarke, 2020, Nowell *et al.*, 2017). For this reason, some themes bore a relationship with the overarching research question, while others did not have much of a relationship with the overarching research question. At this stage I did not discard the themes that did not have any significance to the overall research question because at this stage I had not yet reviewed and refined the themes, as the reviewing and refining of themes belongs to phase four. My not discarding the themes that had a remote relationship with the overarching question, resonates with the argument by Nowell, *et al.* (2017), that themes which bear little relevance to the study could be of significance when added to the background of the study. To construct initial themes from the codes, I went back to the data, read the data back and forth, and went through the codes thereby engaging myself in a recursive process in view of ensuring how different codes were coming together to form overarching themes (Braun and Clark, 2006).

In phase three, I ended up with themes and sub-themes that I constructed from codes whose ideas shared some relationship. The table below illustrates the themes and sub-themes:

TABLE 4.3

Theme: **1) Mining and Mined SRHR Information**	
Codes	**Sub-themes**
Accessing SRHR information Researching for SRHR information via mobile media Accessing information from Google and Instagram Accessing information via mobile gadgets Accessing information on the internet Accessing information easily online Research for SRHR information online	Mobile media
Tell my friend Educate my friends Share at home Sharing information with family Sharing information with friends via phone Getting information from friends Accessing information through friends Sharing information with family and friends Shared the knowledge I had gained	Interpersonal: friends and family: online and Offline
Theme: 2) The Mined and the Why	
Codes	**Sub-themes**
Sexually transmitted infections including HIV Rape Abortion Defilement Menstrual hygiene	SRHR areas of adolescent interest online

Teenage pregnancy Early marriages Keeping your virginity till marriage Abstinence Avoiding casual sex Keeping your virginity till marriage	
Sharing information with friends Acquiring knowledge Sharing with peers Prevention of STIs Prevention of teenage pregnancy Sharing knowledge with others Personal menstrual hygiene Discussing with friends Sensitizing peers Teaching others Learning Asking for advice	Motives for searching for SRHR information online
Theme: 3) Adolescent Girls' Desire for Autonomy	
Codes	**Sub-themes**
I don't have a phone I have to ask for a phone Used my mother's phone Used my sister's phone I rely on people with phones I used my aunt's phone I can't access the phone when I want	Challenges of adolescents' access to SRHR information due to non-ownership of smartphones

I can't access information unless I borrow a phone Given limited time to use the phone "My mother told me; you are too young to use the phone" Being asked to do chores as a condition to use the phone	
When I write my exams, I will have a phone Dad promised me a phone when I complete secondary school My parents will buy me a phone whether they like it or not I will be saving money I am given for lunch so that I buy my own phone I am buying a phone no matter what my parents think My dad must buy my first phone when I finish school I will be banking so that I buy my own phone I will be banking money to buy my own phone I plan to tell my parents to buy me a phone I still do not have a phone until I write my exams I will ask my parents, guardians to buy me a phone	Looking forward to owning a personal smartphone
Theme: 4) Affordances of Mobile Media	
Codes	**Sub-theme**
Google Facebook YouTube WhatsApp	Frequently used mobile media Apps and social networking sites

TikTok	
Theme: 5) Celebrating Freedom but Desiring Control	
Codes	**Sub-themes**
Using mobile media is like having a private conversation with yourself Searching for SRHR information on mobile media is private No need to be shy because nobody is seeing you Google can't look down upon you Google will keep secrets, but people will share what you ask them Mobile media is private I am not always good at interacting with people in person Not comfortable to talk to my mother about certain things On mobile media, you are the only one who knows what you are searching about If you have a mobile media device, it is always available to you, unlike relying on people for SRHR information Free on mobile media Mobile phones help us to get information privately I am introverted Openness to share SRHR information through Social-networking sites No one is able to see me "I wasn't able to feel shy or suffer in silence" I love my privacy	A feeling and experience of online privacy

Very uncomfortable to talk to someone in person about SRHR There are things I would not ask my parents because they would know my secrets Can privately ask about how to prevent pregnancy I would be limited to discuss SRHR issues with my mum or my sister Mobile media has a lot of privacy On Google, I ask things that are secret You cannot ask your mother about how to avoid getting pregnant On Google you will not have that shyness of talking to someone about your problem Not free with mum Not free to ask parents SRHR questions Not free with parents	
Cyberbullying Using abusive language Insulting you People lowering your confidence People talking bad at you Being looked down upon Responding rudely Verbally abused Lower your self-esteem Mock you Discourage you	The reality of online abuse
Theme: 6) Unceasing Tension Between Online Privacy and Online Public Surveillance	
Codes	**Sub-themes**

Could not post anything on Facebook because I was using someone else's phone Most people on these sites are local people you stay with within the same communities Being discussed by community members Being bullied by community members Using someone's Facebook account Using someone's phone Brother accesses everything I search for, and suspects that I search for Pornography	Online privacy is not absolute
Theme: 7) Mobile Media: The Good, The Bad, The Ugly	
Codes	**Sub-themes**
Easy access to information Learn a lot Quick answers Detailed information More information Getting more information Sharing information Gathering information Full information Updated information Different types of information Learning more Knowing more Extensive information Gives you more views and opinions Direct information Does not leave out details	Adolescents' praising Mobile Media as a source of SRHR information during Covid-19

Deep information Explains things in a logical manner A lot of information Immediate responses Gives correct answers "Parents would be asking you why you want SRHR information, but mobile media will not ask" Mobile media will not lie to me You learn things your parents cannot tell you Mobile media doesn't use riddles Variety of information Has a lot more information than from friends. People will not tell you everything, but mobile media does People cannot explain things the way social media does	
Posts, too deep for young people Adult content Inappropriate content Fake information Wrong information Not all information is correct Irrelevant information Too many adverts Irrelevant stuff Sometimes leads to pornographic videos False information Gives you more information beyond your age	The downside of mobile media as a source of SRHR information for Adolescents

Does not always provide the information you need Leads to watching pornographic movies Sometimes people on social media give conflicting answers.	
Theme:**8) Roadblocks on the Way**	
Codes	**Sub-themes**
Bundles finish very fast Must ask for money for bundles My sister would tell me to buy bundles if I had to use her phone Sister complaining about her bundles finishing Lacking bundles You cannot access SRHR information on mobile media if you don't have bundles Look for money to buy bundles Using money meant for food to buy bundles I had a challenge to buy bundles because I don't work Asking for money for bundles No bundles No talk time to make bundles Not being given the phone because I don't help with bundles Unable to access internet when you don't have bundles Bundles are expensive With google, I use a lot of bundles YouTube consumes a lot of bundles because of videos	Internet bundles as a barrier to accessing SRHR information via mobile media

Facebook can be accessed without bundles Pinterest also works without bundles **Codes**	
Slow network Zamtel Network is very slow Poor Network Network time-out Network is problematic No network Bad network	Internet Blues as a barrier to accessing SRHR information via Mobile media
Codes	**Sub-themes**
Cannot understand what it brings Uses big words that you don't understand "The English that Google brought, up to now I don't even know what it means"	English as a Barrier to Adolescent Access to SRHR Information
Theme: 9) Locally Constructed SRHR Knowledge	
Codes	**Sub-themes**
Open to my grandmother When my grandmother is around, I go to ask her Aunt told me My sister told me My mum told me I was told by my mother My mum and grandma told me I would go to my mother I go to my mother, and she explains I asked my grandma	The Place of Women in Adolescent Girls' SRHR Orientation and Needs

My mother is always talking about SRHR issues When I told my mum about my first menses, she told her elder sister Female teachers School matrons	
Codes Old tradition, I do not want to practice it Our culture is slowly fading A long time ago, culture was very strong Today, parents are too busy to sit down with their children Information from culture is exaggerated Mobile media never brought me anything from our tradition and culture, these we get from our grandmothers Putting you in seclusion when you come of age is old tradition	**Sub-themes** Adolescent Girls' Perception of Culture and Tradition on SRHR Issues
Theme: 10) Dying and Rebirth	
Codes Come of age Keep my body clean The time I came of age When I came of age My grandma and my mum sat me down when I came of age When I became of age How the body changes when you come of Age When I reached sexual maturity, mum sat me down	**Sub-themes** The Interconnection Between Adolescent Girls' Sexual Reproductive Health Information and Coming of Age (puberty)

When you come of age, you should abstain from sleeping with boys "When I came of age, my mother told me not to be found with boys anyhow because I would get pregnant" Puberty stage When I reached menstruation, was told not to have much interaction with boys When I came of age, my mother told me that I shouldn't have boyfriends When you have sex, you become pregnant When I reached menstruation, they told me that I should not be hanging with boys You have come of age, sleeping with a boy is bad, you will get pregnant	
Codes Now that you are menstruating, you are not supposed to cook You are not supposed to put salt in food When menstruating, a girl is not supposed to eat food with salt When menstruating, a girl should not sit on a brazier Should not sit near fire because they would urinate blood I learnt from mum that traditionally a man is not supposed to talk to you about menstruation A man should not see your menstrual blood Not to talk to a boy till you wash your hands during menstruation	**Sub-themes** Myths Surrounding Menstruation
Codes Keep yourself clean	**Sub-themes** Menstrual Hygiene and Management

Look after yourself properly Change pads frequently Did not know that we should be moving with pads I would wear a cloth at first Pads should be given freely	
Theme: **11) A Balancing Act**	
Codes	**Sub-themes**
They tell me to stay away from boys, but Google says we should interact but not get involved sexually It doesn't make sense, boys are human also Parents give us the same explanations as Google about preventing pregnancy I researched on Google about how to prevent AIDS, and my parents told me the same thing I don't think mobile media brought me anything on tradition and culture-these we get from our grandmothers and other big people TikTok videos instructing us on traditional things My mother told me how to keep my body clean, Google said similar things Putting you in seclusion when you have come of age is old tradition Was told by my grandmother to abstain from boys, the internet said something related What I researched on mobile media about pregnancy was almost the same traditional information Unlike the old stuff of tradition, mobile is updated	The Differences and Similarities Between Local Cultural Perspectives on SRHR and Western Perspectives

I searched about abstaining from sex, and it was corresponding to tradition Sometimes the information is not the same Society tells you sex is bad without giving you reasons, but Google gives reasons I was told to stay away from boys, and Google said the same "When I came of age, my mother told me that I can get pregnant if I am found with boys anytime, but Google said I can only get pregnant when I have sex with boys. These are two different things." The things my mother told me, and the things I found on Google are related SRHR information on mobile media contradicts with locally generated content Not everything relates "Culture says if you have lost your hymen, then you are not a virgin, but Google says there are types of virgins, so they don't relate." It is different from tradition Some things relate while others do not "In our tradition, they don't allow same sex marriages." The information was not the same The information I got from home is what I got on mobile media The information from my grandmother, and from Google was similar Information from mum and from Google was somehow related Information did not relate on not putting salt in food during menses The information on bathing properly relates	

Theme: 12) The New Grandmother Storms the SRHR Space	
Codes	**Sub-themes**
Gives me things easily than my parents It is faster Does not use riddles Goes straight to the point Google gives me more on what I want I searched on Google, and it gave me answers I went to Google Google is worldwide Read something on Google Gathered information from Google Google will know any question I prefer using Google Google gives me correct answers I feel Google is better because friends sometimes give wrong answers When you ask Google a question, it will bring the answers Google is fast, it will bring you answers immediately Learnt a lot from Google Google does not provide emotional support Resorting to Google to verify information I can get more advanced knowledge than from peers and family People's knowledge is limited compared to google Parents do not go into details, but google does	Adolescent Girls' preference for Google over Grandmothers and mothers for SRHR information

Some parents don’t know the full details, but google will give you the information you need	
Learn more from Google	
Almost having a private conversation with Google	
People instructing you when you come of age, use proverbs, but Google helps you to understand things	
Google goes deeper unlike word of mouth	
Google gives you a lot of information	
With Google, mostly you get professional opinions	
Google tells you things directly, grandmothers tell you things indirectly	
I am more open to Google than to my family members	
You feel uncomfortable to ask your mother about SRHR, but on the internet, nobody is going to be watching you	
It is easy to access information from Google than from parents	
Google knows everything	
Google knows a lot of things	
Google is better because it gives you different views from different people	
Google gives information from different people	
Our culture is fading away, and many people will not be told things by their parents, you google for information	
Gives you information from people who have been in different situations.	

Gives you views from different people, not only in Zambia Parents are busy, and children don't want to ask, so mobile media helps a lot Google gives a better understanding Google has a wide range of information Google answers in detail and gives examples	
Codes	**Sub-theme**
Google might not give you truthful information on traditional things Disadvantage of Google, it brings a lot of adverts Google might not have everything, but at least you find something Disadvantage with google, it goes too far, brings you something else Google brings advanced words which you don't even understand	Google's Overrated-ness in the Eyes of Some Adolescent girls

5.4 Phase Four: Reviewing Themes

Once the possible/candidate themes have been constructed in phase three, phase four focuses on refining these themes (Braun and Clarke, 2006). In phase four, some themes are abandoned owing to insufficient data supporting them while others are merged due to their similarities, and yet others are broken down into separate themes (Braun and Clark, 2006). As guided by Braun and Clarke (2006), for this study, I sought to review and refine themes by reading and re-reading the coded data extracts for all the collated data for particular themes with the intention of finding coherence in the patterns. This process took me several weeks as I went back and forth between candidate themes and the collated data from the FGDs. I coloured the candidate themes, and continuously read through the entire data set to establish which codes were strongly related and consequently forming a coherent pattern. In the process, I established that some codes did not have enough data

to support them. Some of these I abandoned while at the same time retaining those that bore similarities with the codes whose relationships were strong.

As I proceeded with the processes of refining the themes, I observed that some data within the themes needed to be coded because I had not constructed them during the initial process of coding, and such an observation was not strange as it is affirmed by Braun and Clarke (2006). For Braun and Clarke (2006), coding is a continuous process, and therefore re-coding from the data set is normal. The process of refining themes is very involving and undoubtedly presents difficulties in terms of determining when to stop, but the researcher must stop upon observing that he/she has refined themes that capture the full story of the data (Braun and Clarke, 2006). Admittedly, I found myself in such a situation as I had difficulties knowing when to stop, however, eventually I had to stop once I felt that what I had done in refining the themes was sufficient to tell the full story of the collated data.

5.6 Phase five: Defining and Naming Themes

According to Braun and Clarke (2006), phase five involves defining and refining themes that are to be presented for data analysis. In this phase, I embarked on establishing the substance of each theme, and the aspects of the data each theme expresses as guided by Braun and Clarke (2006). I went about considering what each theme was telling in relation to the overall story of the data, and how individual themes related to the research questions to capture the essence of my study (Braun and Clarke, 2020). The defined and refined themes contain some sub-themes for a twofold purpose: to provide structure to the large themes, and to show the hierarchy of meaning inside the data (Braun and Clarke, 2006). As I went about naming and defining themes, and further analysing them, I merged some of them depending on how closely they expressed the same idea. I came up with the following 8 themes: 1) Affordances of mobile media, 2) Unceasing tension between online privacy and public privacy, 3) Embracing Information and Knowledge, but not without discernment, 4) Barriers/Limitations to mobile media use for SRHR information, 5) SRHR through the Cultural Prism, 6) Transitioning, 7) Detached yet attached, 8) Google as a Grandmother. These themes are categorised into two chapters of 4 themes each for purposes of analysis. The two chapters are Chapter Six which is titled “Mobile Media”, and Chapter Seven which is titled “Drinking from Two Fountains: Cultural and Modern Spaces in Adolescent Girls’ SRHR Conversation.”

Chapter Six deals with the first 4 themes and helps to answer the first four research questions, while Chapter Seven deals with the last 4 themes and helps to answer the fifth research question, in addition to partly responding to the fourth research question. For ease of reference, the research questions are reprised here:

1. How did adolescent girls in the four selected schools in Lusaka, Zambia, employ mobile media to access information on SRHR during Covid-19 pandemic?

2. What were the affordances and limitations of mobile media to accessing SRHR information during the Covid-19 pandemic?

3. What were the main sources of SRHR information for adolescent girls on mobile media during the Covid-19 pandemic?

4. How did mobile media participatory activities of adolescent girls enhance their access to and sharing of health information on SRHR during Covid-19?

5. How can the experiences of adolescent girls with mobile media translate into post-Covid-19 context for access to SRHR and use of information gained?

5.7 Phase six: Report Writing

The defined and refined themes make up phase six as they are the basis for the final analysis and production of the report (Braun and Clarke, 2006; 2020). Based on this guidance, chapters 6 and 7 of this study presents the defined and refined themes as the last part of analysis and report which is done simultaneously with data presentation and interpretation.

Conclusion

This chapter presented the collected data from the eight FGDs that were conducted in four selected secondary schools in four districts of Lusaka Province using the above theoretical and conceptual framework. As this chapter shows, the data was presented according to reflexive thematic analysis by Braun and Clarke (2020). The analysis of the data also benefited from the views of other scholars such as Nowell *et al.* (2017), and Creswell (2006).

The data presentation and analysis has been done in two chapters, with chapter 5 and 6 focusing on one umbrella theme of Mobile Media, and chapter 8 dealing with the umbrella theme of Cultural and Modern/Scientific spaces in the adolescent SRHR spaces. The two umbrella themes capture and discuss the final themes that were generated/constructed following the guidance of Braun and Clarke (2020).

It must be noted that all the names of participants given in these chapters are not their real names but pseudonyms. This was done to protect the identities of participants to ensure anonymity. The next chapter presents and analyses findings under the theme of mobile media.

CHAPTER SIX

6.0 PRESENTATION OF FINDINGS AND ANALYSIS

6.1 THEME 1: MOBILE MEDIA

6.2 Introduction

This chapter presents findings on Mobile Media as 1) Affordances of mobile media, 2) Unceasing tension between online privacy and public privacy, 3) Embracing Information and Knowledge, but not without discernment, 4) Barriers/Limitations to mobile media use for SRHR information

6.3 Affordances of Mobile Media

In appraising mobile media, the girls overwhelmingly brought to the fore that mobile media came in handy in making up what they missed out in school on SRHR owing to Covid-19 induced school closures.

What came out of the discussions with the girls by and large is that in the context of the Covid-19 lockdowns, and prolonged closure of schools which affected adolescents' spaces for access to SRHR information, adolescents resorted to mobile media to access SRHR information or increased their interactions with mobile media. In highlighting the effects of the prolonged closure of schools on adolescent spaces for accessing SRHR information, a grade 12 participant Sunganani Banda of Chongwe Secondary School remarked:

> *During school time, we had a club called C.S.E, (Comprehensive Sexuality Education) which talks about reproductive health and challenges in the world. We used to have meetings on Thursdays, and we used to interact, they used to teach us, and they also encouraged us to go and teach others, but then during the Covid-19, the club dissolved.*

This experience was corroborated by what Faneli Bwanausi, a grade 8 participant from Mt. Makulu Secondary School was shared that: *"During the lock-down, I didn't get much information on SRHR because we were cut off from our friends at school who we could get a lot of information from before lockdown."*

For some adolescents, the lockdowns and school closures provided them with an opportunity to spend more time navigating mobile media to search for different types of information including

SRHR. For example, Malitela Mubita, a grade 12 participant from Mount Makulu Secondary School FGD said "*The lockdown affected me because we were not able to interact with our friends and our relatives to ask them in person for the information we needed at that particular moment. I was able to access the SRHR information via phones, sometimes laptops."* A grade 11 FGD participant from Kabulonga Girls Secondary School by the name of Bwale Mulenga shared that being away from school gave her more time to access mobile media from which she acquired information on SRHR information:

> *When we were coming to school I could not access the internet as much as when we closed because when we were home, we had little things to do because we were always home so I had a lot of access to my phones and mobile media, and I can say it actually taught me a lot on sexual reproductive health and rights more than interacting in person with people.*

Jane Shema another participant from Kabulonga Girls Secondary School, a grade 10 expressed similar sentiment: *"we had little things to do because we were always home so I had a lot of access to my phones and mobile media, and I can say it actually taught me a lot on sexual reproductive health and rights more than interacting in person with people."*

The discussants in almost of the secondary schools where FGDs were conducted for this study generally revealed that during Covid-19, one of the sites that they used for searching and seeking ASRHR information was Google. This can be gathered from their verbatim: *"When I am looking for information regarding relationships with boys, I use Google and search for how to treat a boy if they are in a relationship"* was what Mutintha Hamaanje in grade 12 at Mount Makulu Secondary school said, and as for Kalaluka Chimpali a grade 9 from Chongwe Secondary school she had this to say: "*When it comes to searching for information about my body, I use Google.*" In relation to what Kalaluka said, Anita Adams, a grade 8 from Kabulonga secondary school shared: *"When you get your period for the first time, and you are too shy to ask, you can search Google to find the information you are looking for, and you do get the information you need. You can go to YouTube too."*

6.3.1 Social Media

6.3.1.1 WhatsApp

A good number of girls in the FGDs in all the schools talked of having had deep conversations on WhatsApp groups on SRHR. And since the group on WhatsApp was gender biased (comprising only females) they were at home discussing SRHR with each other. The SRHR topical issues among others were prevention of early pregnancy, abstinence, over-familiarization with boys at puberty, menstruation, hygiene, STIs, HIV and AIDS, how to detect sexual abuse and how to avoid environments that would lead to such.

One of the grade 8 participants Chimangeni Banda from Kabulonga Girls said that she felt very encouraged to belong to such educational groups that were a very good and useful source of SRHR information during the pandemic lockdown. "*I learned that people will not talk about the SRHR with their families, but they were freer to discuss it with their friends. They would post that they are pregnant on WhatsApp and needed advice, but they have not told their mother or relative yet."*

The participants further discussed that they felt bound tighter because their joining the WhatsApp spoke volumes that they were not the only ones going through SRHR experiences and they were freer to discussing them with other fellow girls on the group.

A grade 11 Salifyanji Matandiko from Chongwe secondary school alluded to the fact with WhatsApp, one was poised to know a lot of information from family and friends and that they would also share the same information to others: "*Sometimes you find that people have posted a video on how to keep ourselves clean when we are having our periods for us girls. We also chatted on issues like unwanted pregnancies, abortions, early marriages and many more."*

Another grade 11 girl from the same school, Given Chilekwa in emphasising her friend's point of discussion said *that "We need to follow groups that are helpful, those which can teach us how we can avoid pregnancies and use contraceptives. These are the groups that I see as good. This is because the groups can help us realize our dreams."*

6.3.1.2 Facebook

The majority of the girls participating in the discussions said that they used Facebook to search and share about issues pertaining to SRHR. The issues according to the way the discussions panned

out, ranged from menstruation and personal hygiene, abstinence, early marriages, teenage pregnancies, to a whole array of issues that struck a chord with their sexual reproductive life in so far as rights were concerned. "*I was using Facebook because it has a lot of information on SRHR"* was a phrase echoed by many participants.

6.3.1.3 Tik-Tok

More than half of the girls in the discussions said that they used Tik-Tok often. "*As for me*, *I used the mobile phone app google and TikTok because it is easy to use (*Kachilowa Salafina, Kabulonga Girls, Grade 12). And another girl (Grade 10) Kamutukule Vera from Nakatete, giving her reason for using Tik-Tok a lot said; "*I used TikTok so that everyone can see what I am talking about and also my situation and also for watching videos on topics I didn't understand so that I understand."*

6.4 Search Engines

6.4.1 Google

In talking about Google as a search engine most of the participants fondly referred to it as 'Uncle Google', and as such used it for any SRHR information. *As for me, I used the mobile phone app google because it is easy to use* piped one of the grade 10 girls from Nakatete Secondary school Chikamba Kaluwa and another from Mount Makulu (Maliti Karlo in grade 9) had this to say about 'Uncle Google', "*I used Google because it gave me a lot of options like answers. It will illustrate and give me examples*. *I used to google I would want to understand questions and words on SRHR I did not understand so I would google*."

6.4.2 YouTube

In their discussion on SRHR information access, most of the girls said that they go to YouTube because of its pictorial and video character. *It is just like you are in class. It played a role of personal guide; it tells you more information than any other person can, commented* a grade 9 participant Chikhulupililo Kandawa from Chongwe secondary school.

However, some adolescent girls in the discussions shared the perception that learning about certain SRHR topics online could have a negative influence on their behaviour. Specifically, the concern was that they would be encouraged to have sex before getting married. They said that as young

girls they were predisposed to being negatively influenced by the internet and start chatting to strangers or having sex. They also mentioned that they were fearful they may end up acting on unsafe or harmful information found online, so preferred not to search for information at all. Some older participants in some schools were even more fearful of being negatively influenced by online information than younger participants. Nyambura Simango, a grade 12 participant from Mount Makulu secondary school said this to echo the point of view given above *"If I was searching for information that would help me prevent unplanned pregnancy and then I stumble upon an article that talks about how to use a condom ...that article would somehow have a bearing on me to have sexual relationships knowing that there is a way to prevent unwanted pregnancy."*

Some girls in FGDs did express some worry that searching for SRHR information online could bring about exposure to explicit material. They talked of the most common disadvantage of using a phone to search about SRHR was encountering pornographic videos or websites. The discussants argued that the risk of encountering pornography stopped them from using the internet to access SRHR information. Chisomo Katema had this to say to concretise on this discussion point: *"It also has the downside in the sense that, at times, you search for stuff like videos and what comes are those videos that are not good and but then you will already have seen those like shameful videos and photos."*

In chipping in, Exildah Mwendana put it that *"as adolescents we are very vulnerable to some crazy people who are on the internet 24/7 to want to have canal knowledge with minors but not by a significant number of participants."*

Chimwemwe Mesaya a prefect in grade 11 from Kabulonga Girls secondary contributing to the flow of that discussion said that she had caught some girls watching pornography instead of using phones and internet for searching and seeking SRHR information. She made her case by further saying that the girls were running into the risk of viewing pornography in the bid to search for SRHR information. However, Munkombwe Moonga a grade 12 participant from the Kabulonga Girls participants suggested said that *"Yeah, you but you can delete it once you come into contact with pornographic material. There is a button you can touch, and the search history will be completely gone.*" And Auleriano Chipasha from a grade 12 class from the same school as her in put to the same discussion, said, *"but I think many people don't know about it...I did not know myself, a friend had to teach me."*

6.5 Unceasing Tension Between Online Privacy and Online Public

Most participants shared about how they felt safe, and secure as they accessed SRHR via mobile media. For many of them, it was almost an escape from the eyes of judgmental and prejudicial parents. For others it was an experience of privacy that gave them space for self-expression and an environment to engage with mobile media without feeling that someone is watching them. Several of them felt their secrets were safer with mobile media information search than having to ask people questions in person. There was a sense in which many participants felt uncomfortable to engage with their parents or other adults in conversations about SRHR, and therefore mobile media provided them with a safe haven.

In the FGD for Chongwe junior secondary school participants, Kamalizya Nyembezi a grade 8 shared about her shyness, and how she feels free on mobile media: *"I am a shy girl, so it was not easy for me to learn one or two things about how to stay as a girl around many people, but through video chats, it was very easy for me to learn and to ask questions."* This experience was also expressed by another grade 8 girl, Koloko Fides of the same FGD who said *"some people can't be open to their families, so they are more open to their friends. For example, they can post that they are pregnant, and they want some advice from their friends, and their friends would give them the advice, but they have not told their mother or relative."* On feeling free and more expressive on mobile media, Jelita Mulenga from Chongwe in grade 9 added *"people tend to feel free to interact and to express what they are experiencing about sexual reproductive health."*

For some participants, it was not themselves who were shy to broach the subject of sexual reproductive health, but their parents, and because they could not get information from their parents, they resorted to social media. For example, a grade 8 of Chongwe FGD, Kapena Musonda said*: "like some parents are shy to tell you full details about some things, you go to grandparents, and they speak in proverbs, so you are forced to go to social media to search for information. And it will give you more information, full information and detailed information."* For another participant (Musupelo Kolala in grade 9, Chongwe), she felt the parents lacked full detailed information on matters of SRHR, and for this reason, she resorted to google to access the information that she needed.

On expressing oneself freely because of the privacy offered by mobile media applications, Kadija Kazembe a grade 9 of Chongwe secondary school put it this way *"it is like having a private*

conversation with someone, whereby it wasn't a face-to-face conversation with someone. Because for me, it is hard to express myself. I am a shy person, so it provides privacy." And her counterpart Owonenji Buma in grade 10 at Nakatete shared a similar experience that mobile media

> *helps us to get information privately. For example, on issues of early pregnancies, I can't go and ask friends about what to do for me to prevent myself from getting pregnant, because some people can't keep secrets. Before you know it, everybody gets to know about it, and they will be saying that this is what she wants to do. It is better for me to search for information privately, know which type of pills to take to prevent me from getting pregnant once I have sex.*

Another participant (Mailesi Nkhoma, Grade 11, Chongwe) said she was not free with her parents, and so mobile media provided her access to SRHR information: "some of us are not free with our parents, like speaking for myself, I am not free with my mum, so there is no way I can be discussing issues of SRHR with her." Another grade 11 participant Kaseba Chikondi this position *"not all the people are actually comfortable speaking to someone face to face, so mobile media is the best place because you won't feel shy, you won't feel scared. It is like you are just alone."* A grade 12 (Kaleza Longuwe, Chongwe), agreed with this sharing *"not everyone is free with their parents whereby they can ask any question. I for one, I am not free with my mum, I am not free to tell her about sexuality stuff. But like when I have a phone, I can search for anything I want."* The situation of girls not being close to their mothers permeated through almost all the FGDs. In the Nakatete FGD for seniors, a grade 12 Mayeso Yolimba also said *"I am not close to my mum, we can't sit as mother and daughter for her to be telling me about issues of SRHR, so I have to rely on my phone."*

Ngoza Muchenga a grade 10 of Mount Makulu referred to SRHR information as private and therefore it should not be shared with anyone. She further expressed the fact that she likes her privacy. Another participant Kadothi Mvula, this time around, a grade 11 student, expressed her discomfort at talking to other people about issues of sexual reproductive health: *"when I want to search for something, sometimes it is very uncomfortable to talk to someone about that. The fact that mobile media applications provide privacy, it is very easy for me to express myself in that sense."* This was agreed with by Mukongolwa Mikela another grade 11 participant:

> *when you search for something, it is private, and you are in your comfort zone. You can search for anything, it is limitless, and you are the only one who knows about the information you are searching for. You search for a lot of things. You search for anything you want. You won't even be guilty, so you get to be more aware and more informed.*

Elita Jumbe from Kabulonga Girls (Grade 10), *"It was private, like when you tell someone, and then the other day you hear it from someone else. So, for me, mobile media is private, when I ask a question, no one will know that I am asking this."* The desire for privacy and secrecy is seemingly high among adolescents, as many of them wanted as much as possible to ensure that their parents did not know what they were searching about or what they were sharing with others on matters of sexual reproductive health. This is the case as expressed by a grade 12 of Kabulonga Girls Mwape Kumwenda: *"there are those things that I cannot ask my parents about because they would know my secrets. So, I would just use mobile media."*

6.5.1 Privacy is Not Absolute

Given the present fears of having their privacy invaded or their spaces encroached on, several participants in this study were sceptical about the absoluteness of online privacy. Paxina Kazandwe a grade 12 participant in the discussions from Chongwe had this to say about online privacy: *"when you send a question to this person, and the person doesn't understand the question, she will send it to another person, and then to another person. So, something which you thought to be private gets to be known by many people."* This fear was similar to the one expressed by a grade 12 participant of Nakatete Chilema Chilete who intoned that, "*the disadvantage, for example on Facebook and WhatsApp is that most of the people on these sites are local people you stay with within the same communities. So, if you ask about how to keep yourself clean or how to abort or how to abstain to avoid pregnancy, when they see you in the community, they start discussing you and bullying you."* A different experience was shared by Kapamaba Mphatso a grade 11 from Nakatete which has to do with one's search history being accessed by another person: *"I did not set up my iClouds properly, so for everything that I search, the information goes to my elder brother. Like he is able to access whatever I search about through his iPhone. So, if I try to search for information on SRHR, he would think that maybe I am trying to search for pornography or something."*

And Ivy Mutwale from Mount Makulu joined the discussion by pipping up her contribution as *"I don't have my own phone; I use my sister's phone and I am not able to search more on her phone as my parents will get to know what all I search for and they will think wrong of me and since it is my sister's phone so she will also get to know."* Kashimbi Kabudula also argued saying that *"Search history and dates get saved; that's why adolescent girls do not search about topics freely."*

6.6 Embracing Information and Knowledge but Not Without Discernment

Many FGD participants in this study experienced mobile media as a fountain of SRHR information that they could rely upon in their quest for empowerment regarding sexual reproductive health. The ease and speed with which they could access information endeared many participants to mobile media. For example, grade 12 Chiwalo Milela a participant from Nakatete pointed out that mobile media gives answers easily and enables adolescents to gain more knowledge on SRHR issues. This trust in Google as a good source of information for SRHR was also resounded by Kaleya Tisa a grade 11 of Chongwe: *"With Google, mostly you get professional opinions because scholars and doctors on the platform. Maybe they have written articles which they have posted."* Similarly, a grade 12 of Kabulonga Girls Tonga Nkhumbwi said: *"social media gives you views of a lot of people not only in Zambia, but around the world. Because social media is around the world, so you know what someone from Canada knows, what someone from Australia knows. It is a big platform."* In the same vein, a participant Kamphasa leya (grade 8) in the Nakatete junior grades FGD expressed confidence in Google to the extent that she felt it is much better than having to rely on friends who would end up giving her wrong answers. Lesa Luwiza another grade 8 added that Google gives answers immediately and provides a platform from which to learn. Magarita Mfumu, a grade 12 participant from Nakatete praised Google as she said it *"gives you full information about how to protect yourself from STIs."* A participant from grade 12 Kanyembo Mpemba of Kabulonga praised Google for having a wide range of SRHR information and how when she did not understand what she found on Facebook and WhatsApp, she would resort to Google to seek clarity. While Google was praised for its ability to facilitated learning and access to information, a grade 11 participant Kalikeka Masiye from Nakatete issued a warning *"care must be taken that this information is not misused because it can kill you."*

Several participants praised mobile media for its facilities to provide information quickly, logically, detailed as well as expansively and directly. Additionally, many were happy with the fact that mobile media does not use riddles or proverbs. Other participants expressed happiness about social

media sites on mobile media as they said these provide more and better SRHR information compared to obtaining this information from people in-person. A grade 9 participant of Chongwe Mariana Chiputa shared that she used Google to search for SRHR information, and got detailed information, including examples. Kachepa Malaila a participant in grade 9 in the same Chongwe FGD added *"I search on Google, and I get more advanced knowledge than from my peers and families because their knowledge is limited compared to Google."* In the Chongwe FGD for senior grades, Eliza Kachali a grade 10 participant was detailed in her praise for the Google and YouTube Applications on mobile media

> *Google has a lot of information, and it does not leave out details. YouTube is more like a lesson; you are able to watch videos of teachers teaching. It is just like you are in class. For us who like listening, it is very good because you get the information you need. And if you are a good reader, Google is good for you, it will give you a lot of information you need. Google for text information, YouTube for video information.*

A different dimension on mobile media was offered by a grade 11 participant Lubinda Nonsiku from Nakatete Secondary School who emphasised the educational side of mobile media. She praised mobile media for its role in educating adolescents more about sexually transmitted diseases, especially because of the vastness of the information that it provides. Such a perspective was also shared by a grade Makala Euginia a grade 12 of Mt. Makulu: *"mobile media gives a variety of information. We get different opinions from different people, so there are a variety of opinions. And then you could easily understand because people explain different things in different ways"* Makundika Salome in grade 8 from Kabulonga Girls seemed to put a concluding statement to the praise of mobile media as a source of SRHR information: *"Today, adolescents feel the internet is more up-to-date than human beings."*

6.6.1 Misinformation

While many praises were showered on mobile media as a source of SRHR information, some lamentations and scepticism were also expressed by a number of participants. This demonstrated that mobile media technologies possess both positive and negative aspects. For example, Kabosha Aggie a grade 9 from Chongwe shared her experience in which she said sometimes Google gives

you information beyond what you are asking for, as it goes too far, and sometimes it brings something else. Another participant, Kanyanata Frances grade 8 from the same school echoed similar sentiments: *"some posts are too deep for young people. For instance, I am a 12-year-old girl, and I am trying to search for something on Facebook, you find something for big people, and if your parents know, they might even stop you from using the internet."* According to a grade 12 from Chongwe, *"Facebook has different opinions from different people, and since anyone can give or post their opinion, you also get false information including on SRHR."* Another grade 12 of Chongwe bemoaned the inappropriate content found on social media sites: *"when you are searching for sexual reproductive information, mobile media brings other things that may be inappropriate that you would be tempted to watch which is irrelevant to what you are searching for."* A different participant (grade 11, Chongwe) put it bluntly: *"we watch pornographic videos."* A participant (grade 10, Chongwe) agreed and said adolescents should not be encouraged to use mobile media to access SRHR information because it might lead to searching for information which might not be good for them. For example, they start watching pornography which results in them masturbating. Muchona Adessy a Nakatete grade 9 participant put it this way: *"sometimes Google leads you to pornographic videos that you are not supposed to watch."*

On the reliability of the SRHR information accessed through mobile media, some participants felt not all information is correct, although one participant felt (Kawana Thabo grade 10, Kabulonga), SRHR information accessed online is 100% correct. A grade 10 student of Nakatete Margaret Kachindambeta had a different view *"not all information is correct."* In agreement with these sentiments, Malata Flora a grade 11 participant of Mt. Makulu expressed mixed feelings about the medical prescriptions that are found on Google saying if *"you want to protect yourself from getting pregnant or you are trying to abort, Google will show you which contraceptives or medicine to use, but some of these may end up killing you."* Another participant (Malita Kachinda, Grade 12, Kabulonga) was emphatic: *"you can't make Google your doctor."*

6.7 Barriers/Limitations to Using Mobile for SRHR Information

As adolescent girls engaged with mobile media to access SRHR information, they encountered a number of challenges including lack of internet bundles, slow/poor network, limited time on the phone, and loadshedding.

According to Katwenda Notuyowa, a grade 8 pupil from Chongwe Secondary School, bad network was a barrier to accessing SRHR information: *"I was facing bad network, but rather give up, I would go somewhere where there would be network."* Similarly, a grade 9 participant: Mutwe Nkumitandabilo, of Chongwe re-echoed the same network problems, but added challenges of loadshedding: *"The challenges I was facing were poor network on Wi-Fi or the phone battery becoming low, and there would be no electricity to charge the phone due to loadshedding."* Some areas have internet network problems, and this is the case in the place where Mwenda Kapasa, a grade 12 pupil of Mt. Makulu stays: *"The challenge I have is internet network, we have very poor network in our area, sometimes, you find that I want to search for or Google something, and the network times out, you just give up."* Namate Simbote, a grade 8 from Mt. Makulu, also lamented the challenge of lack of internet network: *"again due to poor network because during Covid-19 pandemic, I was in a remote area, so the network was bad sometimes."*

For Matimba Nyamazaya, a grade 11 from Chongwe, internet bundles were a challenge as she complained of how she uses a lot of bundles on YouTube and Google: *"With Google, I use a lot of bundles, YouTube consumes a lot of bundles because the videos."* As a response to such challenges, Matimba uses Facebook as she says it is cheaper: *"With Facebook, for only K5, you get a lot of time to research."* Another participant from Chongwe, a grade 11, Lubono Mwelwa, praised Facebook as being cheap on bundles*: "Facebook is more like a website where you can go and research about anything, with or without bundles."* In addition to Facebook as a cheaper source of SRHR information, Lubono praised Pinterest as cheap: *"Pinterest works the same as Facebook, it does not matter whether you have data or not as long as you just research about things that are common, and it brings a lot of things."* Some participants complained about data being expensive and for this reason, they often lacked bundles. Tambula Janza, a grade 9 from Mt. Makulu said she lacked bundles. This was reiterated by Liseli Lukupa, another grade 9 in the same focus group: *"To add on what she has said, even me, this is the same challenge that I had, like data, its costly. It is not all phones that go on free Facebook. The only challenge I had is bundles, and I do not*

work, all the time asking mumy, mumy I need money for bundle." Namate Simbote, a grade 8 participant, augmented this point: *"As for me, the challenge is due to bundles, and maybe the parents do not have money, and I am not working, they are supposed to buy bundles for me, so I am supposed to understand that they don't have money."* In some cases, parents do buy bundles for their daughters to use their phones to access SRHR information, however, the bundles are sometimes not sufficient. This was the situation of a grade 9 participant from Kabulonga girls, by the name of Abelina Lunyombwa complained about her parents not buying sufficient bundles*: "My parents don't buy me a lot of bundles, so if I am searching, then suddenly it writes: loading, and it will just be loading and loading."*

The lack of ownership of phones is also a barrier in two ways: firstly, little time spent on the phone because the owner/owners of the phone demand for it as and when they want; secondly, the fact that some adolescent girls cannot afford bundles to use in the phones that are not theirs, the owners of the phones do not allow them to use the phones, or allow them for short times, or on condition that they buy internet bundles. This was well exemplified in Luyando Manyika's case, a grade 9 from Nakatete Secondary School: *"I had challenges when using my sister's phones, she would get her phones faster, and she would tell me that I do not help her to buy bundles."* Lushomo Chimbwete, a grade 9 from Kabulonga girls faced a situation where she was told to buy her own bundles by her sister: *"I used to use my sister's phone, but if she wanted it back, she would get it, and in terms of bundles, she used to say I should be buying my own bundles if I wanted to use her phone. So, I used to look for money to buy bundles."* In the same vein, Mukaika Phiri, a grade 10 of Kabulonga Girls, lamented: *"It's that thing whereby you want to buy bundles, but you don't have money. I would go to my mother, then because I don't want to tell her what I want to research about, she would ask me why I wanted to buy bundles."* This situation speaks to the difficulties of adolescent girl opening up to the mother that she wants to access SRHR information because it is not a topic she wants to mention to her mother due to cultural limitations that often do not encourage girls and mothers to openly talk about sexual issues. Such a gulf has potential to either encourage secretive search for SRHR information by the girls, or to miss opportunities to access SRHR information which is necessary to enable them to make informed decisions about their sexuality. Edwina Jabulani, a grade 12 from Kabulonga Girls, weighed in on the issue of not owning a phone, and being told to hand it back while still using it: *"And the thing is that I didn't*

have a phone, so it was this thing of bring my phone back, no I want to use my phone, or you can't use my phone today."

6.9 Mobile Media Discussion of Findings

This study explored the role of mobile media in adolescent girls' access to SRHR information during Covid-19 pandemic. The study found that there was increased use of mobile media particularly through mobile phones by adolescent girls to access SRHR information as they were confined to their homes due to Covid-19. The study showed that Prior to Covid-19, adolescent girls used to access SRHR information, for example through Comprehensive Sexual Education (CSE) in schools, from their Peers, Youth-friendly corners at health facilities and clubs in schools and even their friends at home but Covid-19 shuttered all these channels for SRHR information through closures, lockdowns, and movement restrictions. The study revealed that during Covid-19, adolescent girls accessed SRHR information through various mobile media spaces including Facebook, Google, WhatsApp, TikTok, and YouTube. Furthermore, the study revealed that even during Covid-19 their aunts, mothers, elder sisters, and most prominently grandmothers remained a source of SRHR information which speaks to the constant cultural influence on adolescent consumption of SRHR information. In Chapter Seven, the discussion of findings will delve more into the cultural sources of SRHR information as it deals with themes that relate mobile media with cultural sources. The implication of this dual uptake of SRHR information by adolescent girls implies that the need for SRHR information did not cease in the wake of Covid-19 pandemic public health restrictions (Meherali *et al.*, 2023).

Adolescent girls employed mobile media by accessing SRHR information, sharing this information with their friends, asking questions, having discussions online via chat groups on platforms such as WhatsApp and Facebook. This resonates with Henry Jenkin's participatory culture concept of networked publics in which smartphones provide access to social media platforms for facilitating online discussions, networking and collaborating (boyd, 2014). Through networking with friends and colleagues online, adolescent girls found support in terms of their SRHR challenges through the information shared and received. This finds a link with published literature from the study by Simpson *et al.* (2021) that revealed that mobile phones provide support for adolescent girls and women who were pregnant and living with HIV/AIDS as they used mobile media platforms to share information and SRHR challenges regarding their common condition.

The study further revealed that adolescent girls utilised search engines such as Google and YouTube as they found these spaces to be user-friendly and rich in SRHR content. They praised these search engines as providing lessons are like what is obtained in a classroom setting. Participatory culture theory links search engines to participatory culture in that search engines enable users to seek information. Information seeking is a critical aspect of participatory culture (Burges and Green, 2009). Literature has demonstrated that it is on the basis of information-seeking that new content is discovered, and this new content potentially leads to participation in online communities and discussions (Hargittai, 2002). From seeking SRHR information through Google and YouTube, some adolescents in this study shared that they had deed conversations on WhatsApp groups especially the groups that consisted of only girls. This links to participatory culture as sharing information and resources with each other creates a participatory culture of peer-to-peer knowledge sharing (boyd, 2014). The use of mobile media applications such as Facebook by adolescent girls for seeking and sharing SRHR information provided them with an interactive platform, and this speaks to participatory culture. This also speaks to the argument by Carpentier (2011) that participation in mobile media provides opportunities for adolescent girls to take part in creating and sharing of SRHR content such as videos, blogs, or social media posts, thereby becoming producers of information. Indeed, mobile media also allows adolescent girls to engage in public debates, discussions, and self-representation, thereby fostering participation in SRHR issues. Additionally, Jenkins (2006) posits that mobile media platforms that provide interactive features such as comments, likes, shares, allow participants to engage with content in a more participatory and immense way. Literature shows that globally, Facebook is the most used mobile media platform (Bazzola *et al.*, 2022), and as such it was not surprising that participants in this study reported to have used Facebook more than any other mobile media platform.

During Covid-19, smartphone activity increased exponentially as mobile media became a tool for education and learning (Bazzola *et al*, 2022). We see a similar pattern in the participants of this study as they reported to have interacted with smartphones more than they did during the time before Covid-19. In this study, participants engaged with mobile phones more than any other electronic gadget to access mobile media applications to search for and acquire SRHR information during Covid-19. Some of the issues about which they searched for information include *inter alia*: STIs, early marriages, teenage pregnancy, contraception, and abortion. Literature has also demonstrated that during Covid-19, adolescents used their phones to among other things search

for SRHR information. For example, a study in Indonesia found that 60% of participants in a study used mobile phones to search for SRHR information on issues such as contraception, STIs, and pregnancy (Tamara *et al.*, 2018). As adolescent girls interacted on mobile media platforms, they communicated, shared information, and forged relationships of collaboration while engendering a sense of belonging and networking (Sharma and Naik, 2020). The findings of this study, and what is established in literature satisfy the construct of Relatedness in SDT, and the convergence culture along with spreadable media in Participatory Culture in that adolescent girls forged relationships and collaborated while seeking and sharing SRHR information via mobile media platforms. Jenkins (2006: 3) argues that convergence culture enables new forms of participation and collaboration, where individuals can actively engage in media content. As the adolescent girls in this study engaged with and shared SRHR content on mobile media, they created and engaged in a participatory culture. At the same time, they actively shaped and spread media content as they shared and discussed SRHR content, thereby engaging in spreadable media of participatory culture (Jenkins *et al.*, 2013: 1).

According to the findings of this study, the construct of Anatomy in SDT was at play when the adolescent girls sought to access SRHR information in the face of Covid-19 induced school closures, and movement restrictions as they used this information to make decisions about their health and their lives (Parent, 2022; Ryan and Deci, 2000). This finds expression in literature in the argument of Radovic and Badawy (2020) argued that as adolescents manage their health, they make use of online platforms such as YouTube for peer support, coping strategies and learning from shared experiences. Literature has also established that another widely used mobile media platform is TikTok (Bazzola *et al.*, 2022), and this was the case with participants in this study who found it useful for not only viewing SRHR related videos but also sharing their experiences and receiving support from each other through sharing of videos. This was in line with participatory culture as it supports the use of mobile media specific platforms such as TikTok and Instagram for mobile media participation (Katz and Rice, 2013). This aligns with Fuchs (2014) idea of participatory culture whereby users, audiences, consumers and fans are involved in creating culture and content through joint editing of articles, uploading images, for example on Facebook, or sharing videos on YouTube, or creating short messages on Twitter (now X).

As adolescent girls engaged with mobile media for access to SRHR information during Covid-19, they experienced a sense of security and safety among participants. They felt that their privacy was secure and therefore they could express themselves without fearing that someone was watching them. They felt that their secrets were safe. This feeling of security and safety that enables adolescent girls to express themselves without feeling that somebody is intruding on their privacy finds expression in the SDT construct of Autonomy. This is so, because as the adolescent girls develop, they desire to act independent of external constraints, and as such desire to find expression and support in the use of mobile media. Mobile media makes it possible to satisfy the construct of autonomy as it enables adolescent girls to express themselves freely, and express control over their environment (Parent, 2022). This aligns with Jenkins (2012), who argues that one of the characteristics of participatory culture is low barriers to artistic expression and civic engagement. While the adolescent girls may not have engaged in civic matters, they certainly found that mobile media hardly had barriers such as invasion of their secrets and judgemental attitudes of adults. This is linked to what is established in literature which underscores that mobile health technologies can help overcome barriers of lack of privacy and confidentiality or embarrassment in seeking SRHR information and services (Cornelius *et al.*, 2012; Perry *et al.*, 2012, and Wike and Oats, 2014).

In having mobile media spaces to freely express themselves, some girls who are not confident or courageous to express themselves face to face were able to interact with their peers on SRHR issues, thereby satisfying the psychological need of Relatedness in SDT. Relatedness is also at play as the adolescent girls freely interacted with their peers, and forged new relationships, strengthened the already existing ones, and created peer to peer close connections for support and collaboration (Parent, 2022). This also resonates with Participatory Culture (boyd, 2024) in which sharing information and resources among participants creates a participatory culture of peer-to-peer nature. Many participants expressed a lack of openness and freedom to express themselves before their significant adults such as their parents and guardians. For this reason, they were more comfortable to interact with people especially peers via mobile media platforms. This reflects the basic psychological need of autonomy in SDT as mobile media provided platforms for adolescent girls to be listened to, to listen to others, and limit control from adults. Furthermore, mobile media allowed them space to ask questions and to express their opinions without hindrances (Smailhodzic and Attema, 2016). This allowed them to feel a degree of connection with their peers in an

environment where their opinions were respected (Jenkins, 2012). The feeling of safety and security provided to adolescent girls by mobile media was largely responsible for the rise in mobile media usage for SRHR information during Covid-19. Published literature demonstrated that during Covid-19, there was a rise in mobile media among adolescents to use social networking sites for self-expression and construction of social identity (Bazzola *et al.*, 2019). Additionally, related to findings in this study and the selected theories (participatory culture and SDT), mobile media technologies especially smartphones are omnipresent both indoors and outdoors as they facilitate information exchange and construction of networking societies that enable the creation of novel interactivity between persons, society and the environment (Arts *et al.*, 2021).

The adolescent girls in this study felt autonomous as online technologies via mobile media provided them with the power to engage and interact freely with their peers (Parent, 2022). As adolescent girls freely expressed themselves online and shared SRHR information freely, they engaged in participatory culture as they were not passive recipients of media messages, but actively contributed to shaping the meaning and impact of media texts (Hall, 1980: 132).

While adolescent girls engaged with mobile media for SRHR information during Covid-19, and praised mobile media for its affordances, their experiences also demonstrated some fears and misgivings. The fear of having one's information or posting being copied and sent to platforms that are devoid of the original context of the sharing was seen as a downside of mobile media technologies. Such fears were expressed by Fuchs (2014) as he argued against the celebration of participatory culture in what he termed "pitfalls of participatory culture." He argued against Jenkins' idea of consumers being involved in producing and distributing content by stating the Jenkins was blind to the pitfalls of the internet including such things as exploitation of users, issues of privacy and violations, and surveillance among others. Literature has also established such fears as argued by Hodkinson (2017), that social media affordances present young people with challenges to safeguard their privacy since it possesses the capacity for easily retrieving and reproducing content and spread it to larger and unlimited audiences. This is discouraging for adolescent girls who in the process of their development want to guard their privacy as much as possible especially when dealing with sensitive issues such as SRHR information. In addition to the fear of having their messages retrieved and broadcast to larger and unlimited audiences, adolescent girls in this study also expressed fears about the potential of mobile media to spread

misinformation. Such fears were also established in literature in that while mobile media platforms increase access to SRHR information, it harbours potential for spreading inaccurate and unreliable information among adolescents (Tamara *et al.*, 2018).

Related to the fear of mobile media's potential to spread inaccurate and unreliable information is the inability of adolescent girls to sufficiently evaluate the SRHR information and understand it accordingly. This happens when the adolescent girls lack the appropriate skill set to understand SRHR information accessed on mobile media. This was the case with some participants in this study who felt that some SRHR information they accessed on Google was very advanced, or that the English used was too complicated, or that the information was too professional to be understood. In such circumstances, the need for e-health literacy becomes apparent as this would enable adolescent girls to navigate their way online in acquiring, sharing, and acting upon the SRHR information online. The need for e-health literacy is also expressed in published literature as a study in Iran demonstrated low digital literacy levels (Jalilian *et al.*, 2021). The possession of e-health literacy would enable adolescent girls to have the skills and capacity to obtain, process and understand basic health information and services essential for them to make health decisions (Norman and Skinner, 2017; Busse *et al.*, 2022). The study's findings also ring true with the views of Gasser *et al.*, (2019), who underscore the paramount significance of considering the digital divide and unequal access to technology when designing SRHR interventions. Additionally, the study brought out that most adolescent girls talked of the difficulty or lack of knowledge with regard to delete their search history and protect their privacy on social media connoting some semblance of lack of digital literacy and also how to pin down what one is really searching for and seeking is another ball game altogether. This was a factor in limiting adolescent girls from searching for SRHR information on borrowed phones because it increased their fears of being judged and stigmatized. Indeed, the lack of digital or technological literacy which could be the lack of or limited experience of adolescent girls' use of mobile media affects their ability to have and utilise SRHR information (Bryant *et al.*, 2020: 5054), hence the need for both digital literacy and e-health literacy.

Apart from the fears, misgivings, and potential to misunderstand SRHR information on mobile media, the study also revealed barriers and limitations to accessing SRHR information when engaging with mobile media. Some of these barriers include slow or unstable network, complete

lack of internet network in some areas, limited access to mobile phones, and loadshedding. These barriers are also expressed in published literature which reveals that 56% of Zambians never had access to internet (Lynch and Gadjanovaa, 2022) due to location and age. While literature shows that mobile phone ownership among Zambians has increased (ZICTA, 2018), the findings in this study show that many adolescent girls do not own a mobile phone. For this reason, they rely on the phones of their parents, sisters, and guardians. This situation limits how long adolescent girls can use the phones to access various types of information including SRHR. This limitation is a disadvantage on how much information they acquire, and how often they can engage with their peers online to share information, forge relationships, collaborate and support each other as peers. By implication this limitation disadvantages the adolescent girls from fully creating a participatory culture, and from fully realising the basic psychological needs of relatedness and autonomy as explained in both the two theories applied in this study. The issue of borrowing mobile phones is also established in literature as pointed out by Lynch and Gadjanovaa (2022) who argue that the usage of internet in Zambia is higher than smartphone ownership as those who do not have smartphones borrow from those who have. Lynch and Gadjanovaa (2022), also confirms the findings in this study as they poise assert that Zambia has challenges that include: limited access to internet, poor internet network, cost of data, and erratic electricity supply. Such challenges, in my view are a stumbling block to adequately realise the potential of mobile media as technology that can aid adolescent girls in accessing SRHR information that is vital for their health and wellbeing.

Conclusion

Taking a hard look at the findings of this study indicates that adolescent girls in Zambia during Covid-19 were profoundly dependent on mobile media for accessing information on sexual and SRHR. It is undoubtedly clear that most participants reported using Google, Facebook, WhatsApp, and YouTube to search for SRHR information and Google was the most popular search engine among them. The study also brought to the fore that mobile media provides a sense of privacy and security for adolescent girls to access SRHR information as opposed to adolescent girls discussing SRHR information with parents, family and friends which they may not feel comfortable with. Notwithstanding, some participants expressed concerns about the reliability of online information and the risk of encountering explicit content. The results propose that mobile media has the

potential to empower adolescent girls with SRHR knowledge, but there are also challenges and limitations to be addressed. As argued by Chandra-Mouli *et al.*, (2019), online platforms can provide accurate and reliable SRHR information, but there is a need for careful curation and regulation to ensure quality and safety.

Much as they were able to access SRHR information during Covid-19 through mobile media, some adolescent girls were worried about someone finding out what they have been searching and seeking online and judging them or suspecting that their searches showed that they were sexually active and misbehaving. This fear of judgment did not matter whether one had their own phone, or it was a borrowed one. Having to share a phone if they owned one, or borrowing a phone if they did not, worsened their worry. This then shows that adolescent access to SRHR information through mobile media was limited during Covid-19. By and large, the study places emphasis on the need for a comprehensive approach to SRHR education that integrates both online and offline platforms and addresses the complex needs and concerns of adolescent girls in Zambia (Gasser, *et al.*, (2019).

By implication, gender norms around sexuality and talking about sexuality remain taboo areas. Such areas were being demystified in schools, youth friendly Corners, through peer-to-peer engagements, but Covid-19 took away or limited these spaces. Treating issues of sexuality as taboo limits adolescent girls' access to SRHR information, which in turn limits their decision-making over their SRHR needs. Such cultural norms undermine adolescents' autonomy and agency in making decisions about their own bodies and health. However, it should be underscored that the access of SRHR information on mobile media by adolescent girls is not done in a vacuum because their social and cultural milieu is constantly present and exerts a considerable influence on their health and life.

CHAPTER SEVEN

7. 0: Theme 2: DRINKING FROM TWO FOUNTAINS: CULTURAL AND MODERN SPACES IN ADOLESCENT GIRLS' SRHR CONVERSATION

7.1 Introduction

This chapter looks at the above theme that illustrates how adolescent girls benefit from both the cultural sources as well as from western/scientific sources. The following are the themes that this chapter looks at: 1) SRHR through the Cultural Prism, 2) Transitioning, 3) Detached yet attached, 4) Google as a Grandmother.

The study revealed that mothers were hardly involved in sharing SRHR information and knowledge with their daughters as many girls said they were either uncomfortable to freely discuss with their mothers, or mothers were also uncomfortable to have such discussions with their daughters. For some participants, it was not themselves who were shy to broach the subject of sexual reproductive health, but their parents, and because they could not get information from their parents, they resorted to social media. For example, Myriam Ndakala, a grade 8 of Chongwe FGD said: *"like some parents are shy to tell you full details about some things, you go to grandparents, and they speak in proverbs, so you are forced to go to social media to search for information. And it will give you more information, full information and detailed information."* This revelation speaks to the reality that while mobile media is a source of SRHR information, adolescent girls in Zambia consume SRHR information from both online sources, and offline sources as significant adult women such as: grandmothers, aunties, older sisters, and other trusted women in the community guide through instruction on sexual health matters.

7.1.1 SRHR Through the Cultural Prism

Women have a crucial role to play in not only passing on the SRHR knowledge to adolescent girls but also being a point of reference for guidance at the onset of puberty, and when the girls begin to have their menstrual experience. For some participants in this study, their first experience of menstruation was stressful, and so they had to run to either their mothers, grandmothers or aunts to seek help. For example, Josephine Mulombe, a grade 11 student from Chongwe had this to say *"you find that when having menses, you get emotional. I don't know where it comes from, but*

you just start feeling those mixed emotions in you, and you would go to your mum or your aunt, and they would tell you that it is normal for a girl child to feel like this when she is on her periods." Another participant of Chongwe, Regina Phiri (grade 10), explained how she goes to her mother to share and discuss issues of SRHR, but was quick to say that her mother does not explain things in detail, so she goes to her grandmother who gives her detailed explanations: *"I go to my mother and she explains to me though she will not explain everything to me, but my grandmother would explain more."* Agreeing with her colleague, Mary Banda (a grade 12), also shared how she finds it easier to share and receive SRHR information from her grandmother than she does from her mother: *"Some of us are not free with our parents, like speaking for myself, I am not free with my mum, so there is no way I can be discussing such issues with her, like I feel shy, unless my grandma."*

To emphasise the point of the role of grandmother and mother in imparting SRHR culturally constructed knowledge, Jacqueline Nkhausu, a participant of Chongwe (grade 11) shared her experience:

> *when I came of age, my grandma and my mum sat me down, and they were talking about how the body changes when you come of age, and that after having sex with a guy, what changes and what doesn't change. I was told that if you have sex, your body will change and everything. That your boobs and butt will grow.*

Mary Nakawala, a grade 11 from Mt. Makulu shared about confiding in one's grandmother for emotional support at the commencement of menstruation: *"Emotional support like when your first time to have your periods and your friend does not know so you go to elderly persons like your grandmother."* while a Stella Magambo, also expressed receiving guidance from her grandmother when she came of age:

> *On the issue of emotional support, like has already been pointed out, maybe I ask a friend to help me understand what is happening to me as I have my first menstrual experience, she says she doesn't know coz she has never experienced that. So I go to my grandmother who explains to me that I am now matured, and I am not supposed to put salt in relish when cooking because people who eat the relish would*

> *suffer from coughs, and that I am not supposed to meet with a man during my periods because my fingers would grow long.*

Apart from grandmothers, mothers, and aunts, there is also reliance on female teachers and boarding school matrons that the girls rely on for SRHR knowledge and information. Based on this confidence in matrons and female schoolteachers, Melinda Zibazako, a grade 10 of Chongwe translated this into continued confidence to access information post Covid-19:

> *I will be getting SRHR information from my matron because I know that if I share information with her, it will just remain with her. But with my mother, if I do something wrong, then she would bring out what I told her, or maybe she is just seated, and I am thinking that she is thinking about what I told her, and I get scared to even do anything.*

Melisa Phiri, a grade 10, from Kabulonga Girls praised her female science teacher for thoroughly explaining things about SRHR better than her mum: *"my science teacher really explained everything. She really would talk to the girls. She explained things and made me understand things properly better than my mum because my mum only told me not to open my legs to every boy. My mum didn't even tell me about menstrual hygiene."* This shows the role of formal education through teachers in the sharing of SRHR information with adolescent girls.

As can be observed from the sharing of the participants, the space for talking about SRHR with adolescent girls is so much the preserve of women culturally that having a male addressing girls on these issues is frowned upon including by the adolescent girls themselves because this sphere is private and exclusive to girls. This was seen in the reactions of the Kabulonga Girls Junior (grade 8 and 9) participants when a grade 9 student, Jacintha Baluba, shared about how her male teacher taught them about women's reproductive health: *"For me, I learnt a lot about women's reproductive health from a man, he was our male teacher. He used to explain everything, even how to wear pads*." The participants expressed shock as they murmured and reacted almost at the same time: *"a man! how can a man be teaching you about such things?"* The murmuring got louder when Jacintha shared about how their male teacher even demonstrated to them how to wear a pad during their menses. Unfazed, Jacintha Baluba, proceeded to share how she had heard from her mother that traditionally a man is not supposed to talk to girls about such things, and that a man is

not even supposed to see your menstrual blood, but that as a girl she wondered how this was possible for a married woman not to have her menstrual blood seen by her husband: *"I heard from my mum that traditionally a man is not supposed to talk to you about such things, that a man is not even supposed to see your menstrual blood. But I asked that what about married people."*

While sharing their experiences of receiving SRHR knowledge from adult women, the participants generally noted how a lot of talk about SRHR was done when they had come of age. This suggests that culturally, there is a relationship between coming of age and sexual reproductive health and rights.

7. 2 Transitioning

7.2.1 The interconnection Between Adolescent Girls' SRHR Information and Coming of Age

The study revealed that at the time when adolescent girls reach puberty (come of age), parents as well as other members of the family and the community get concerned about the implications of this stage of their daughter's life. Prominent among the concerns and worries of parents for an adolescent girl of puberty age is teenage pregnancy, the stigmatization of teenage pregnancy, and the shame that grips both pregnant teenagers and the families. Such concerns that lead to concentration of information and warnings against getting pregnant as an adolescent girl. These warnings come in the form of various statements from the girls' mothers, grandmothers, elder sisters' and aunts. These adult women take care to talk to the girls about the dangers of having sexual intercourse with boys as this would make them pregnant. In their talk, the adult women are often indirect in their usage of words as shown across most of the FGDs in this study. They usually communicate through taboos, proverbs and riddles due to the discomfort surrounding SRHR issues.

Belinda Longwe, from Chongwe (grade 11) shared about what her grandmother told her at the time she came of age that she should abstain from boys and not to be laughing with boys anyhow, and not to allow boys to be touching her body: *"I was told by my grandma, the time I came of age, I was told that you should abstain from boys, you are not supposed to be laughing with boys anyhow, don't allow boys to be touching your body anyhow, let your body be respected by everyone."* Jalinga Mbewe, (Nakatete, grade 9) shared about how her mother told her that since she had come of age she had to avoid being with boys: *"My mother told me to avoid being found*

with boys at any time because you would get pregnant." The talk from grandmothers and mothers also contains the emphasis on girls keeping their virginity as was the case in the sharing from a Rosa Jumbe, grade 9 of Nakatete in which the grandmother told her about the importance of keeping her virginity till marriage. This was reiterated by Sabina Bupe, another grade 9 who said her mother told her to avoid boys because she would get pregnant. Another participant, Jofrona Kampamba, (grade 8, Nakatete) was told by her mother at the time she came of age that she must avoid hanging out with boys and being found with girls who do not dress properly. This line of talk was also present in the FGD in Mt. Makulu where one grade 9 (Chimfwembe Kunda) said: *"when I started my menstruation, they told me that I shouldn't be hanging around with boys, and that I should dress properly."* For one girl in Kabulonga Girls (Mumbu Munshololwa, grade 11), her mother told her that she should not have boyfriends since she had grown up, and a grade 8 (Jessica Katotobwe, Kabulonga Girls) said: *"my mum would tell me that once I open my legs for a boy, I will get pregnant."* This is metaphorical language warning the girl not to have sexual intercourse with a boy.

7.2.2 MENSTRUATION AND MENSTRUAL HYGIENE MANAGEMENT

7.2.3 Menstrual Onset

The majority of the participants in the FGDs made a point that they had difficulties in whom to approach with the news that they had started menstruating and testified to the confusion as to what to do next. For example, Maggie Besa, a grade 9 of Kabulonga Girls testified:

> *for me, like the first time I had my periods, I got scared. I was like what! I ran out of the bathroom, I ran outside. I was like, am I sick? Then my sister teased me that you will also be wearing adult diapers like me. She gave me this really long pad, but then I never even knew how to wear it, and she helped me to wear it. So, when my mother came, at first, she thought that I was lying, and she was like no, you can't start your periods this time.*

Another grade 9 participant, Felistus Chembe, of Kabulonga girls had a similar experience:

> *When I had my first period, I told my sister, then she told my mum who started telling my aunt that I had grown. Then my mum bought me pads. By then I didn't even know how to put them on. Later, I*

went to school and told my best friend and my best friend already knew what it was, but her other friend didn't know anything, so that is how we started telling her that when she starts her periods, she should not let a boy touch or play with her body anyhow.

The last part of this experience demonstrates that some girls are fortunate to have friends, and teachers who share with them about how to handle themselves when they have their first menses, but others are not as fortunate as the case was for a Beata Bwalya, grade 9 of Kabulonga girls who shared the ordeal:

when we were young, my friend had periods for 2 days, and it stopped. So, when she came to school, she messed up her dress. We had to take her to the headmistress. She gave her something to wear and told her to take a shower, and also provided her with some pads. We were young, we did not know that you should be moving with pads in your bag.

Some girls have had the fortunate experience of being emotionally supported by their friends at the time they came of age, and had their first experience of menstruation:

For me, I would say I was emotionally supported because I recently matured, I started my pees (menses). I was scared to tell my family members in the house. I was shy. I was afraid. So, what I did was to communicate with my friends on WhatsApp groups for girls' chats, then they helped me with how to keep myself clean, like how to bathe, and how to wear sanitary towels. I was really helped and had the confidence to now tell my family that I had come of age.

During the menstrual experience personal hygiene is an aspect that was spoken about by many participants. The information about personal hygiene is accessed from different sources by adolescent girls, and these sources include their friends, mothers, grandmothers, teachers, and mobile media.

7.2.4 Cleanliness

Matilda Kapolyo, a grade 9 participant from Mt. Makulu praised mobile media for how it helps with information on menstrual hygiene management:

> *It helps me to learn about more things about us girls, for example, when you are attending, you are supposed to make sure you bath in the morning, you change your pad, and you have to wear something which cannot show that you are attending. If you are attending, you don't tell your friends about it. You are not supposed to share that information with a lot of friends, or with boys.*

This praise was reiterated by Marianna Mulenga, a grade 8 from Mt. Makulu, as she said, *"it helps on personal hygiene, like on how to keep our genital parts clean in order for us not to contract some diseases."* Musonda Chibomba, (Nakatete, grade 11) who did not know how to wash her private parts during her menstruation was shouted at by her mother, and this made her resort to checking for information her teachers: "*Me I used to wash my private parts with soap so when I asked, my mother told me that I am not supposed to wash with soap and she started shouting at me. How was I supposed to know? So, I get information about SRHR from teachers, not our parents."* On the continued need for the adolescent girl to manage her menstrual experience, having easy access to sanitary pads is important as expressed by Munalula Lubinda, a grade 12 participant from Kabulonga Girls: *"I feel pads should be given freely as opposed to condoms. Girls' experiences of menstruation are normal, unlike sex. Sex is something people want. Many hospitals and clinics provide condoms for free. Although some organisations are also giving free pads, I feel something more can be done."*

As the adolescent girls receive SRHR knowledge and information from adult women as well as their friends, myths find their way in the discussion. Although these myths have their place in imparting wisdom in the adolescent girls as they come of age, the adolescent girls do not have much appreciation of the myths. Some of the prominent myths around coming of age are connected to menstruation, and I present them here because they were talked about by many participants in this study.

7.2.5 Myths about menstruation

In their discussion about menstruation, many girls brought out some of the myths surrounding the topic which are not scientifically verifiable such as not putting salt in relish when cooking when one is having their periods, not passing through a groundnut field when on menses because it will affect the yield, and many more as can be gathered from the girls' testimonies: Makumba Mutolwa, a grade 11 from Nakatete:

> *Me I have a friend who is in grade seven. When she started her periods, she came to me and asked what she could do and so I told her to relax and I started telling her what she was supposed to do to dispose of her pads carefully because according to what I was told by my grandmother if the witch got hold of it she would not have no children in future*.

There is another myth about not putting salt in food or cooking food when one is having her menses. Juliet Kabungo, (Kabulonga, grade 9) shared that when she came of age, her grandmother told her that she is not supposed to put salt in food because the people who would eat the food would suffer from coughs, and a grade 12 of Kabulonga (Chintomfwa Mukomfwa) shared that for her she was told by her friends that she should not put salt in food or cook food when she is having her monthly period. In addition to these myths, another one is about sitting on or over the brazier during menstruation. Malaika Banda, a grade 8 participant from Chongwe was told by her parents that if she stood over the brazier or sat on it during her menses, she would start urinating blood. This was reiterated by another participant, Chongo Chimpalila, (grade 9, Chongwe): *"me I heard that when a girl child starts menstruating, they are not supposed to be eating food that has salt in it, and that they are not supposed to sit on the brazier because they would urinate blood."* On pregnancy, Maureen Lubanga, a grade 11 of Mt. Makulu shared that she was told that "*it is believed that when a lizard falls on a woman, it means she is pregnant."*

From the discussion on how girls have received information to manage themselves as they come of age, a picture has emerged of how the adolescent girls are getting SRHR information about how to handle themselves when they have commenced their time of puberty. This information is obtained from both family and friends as well as from online sources. The girls have sought solace in family and friends as well as mobile media when the onset of puberty left them confused,

stressed or lost for answers. Given this scenario, adolescent girls have to navigate two worlds: the local and cultural world as presented by adult women, and the western/scientific biomedical world as presented by mobile media.

7.3 Detached yet Attached: NEGOTIATION OF TWO WORLDS

In most of the FGDs, it emerged that adolescent girls are constantly engaging with two worlds on issues of SRHR nature: the western/biomedical world's construction of SRHR and the locally culturally constructed world. This is done with the process of verification in which adolescent girls check to confirm if the information they receive from their grandmothers and mothers, and other adult women correlates with what they access via mobile media's online sources. For example, Lubambe Musonda, a grade 12 from Mount Makulu shared: *I tend to be shy, and so I can't share certain things with people, even my mum I can't, even if I am sick. I first search for information about it, and if I find it complicated, that is when I tell my mum. I just don't feel comfortable like telling someone on what I am feeling."* In discussing the practice of being secluded once a girl comes of age, Makasa Shumba, a grade 9 from Chongwe had this to say: *I searched on Google, but then when I asked around, others were saying like it is old culture, you don't have to do that.*

In a sense adolescent girl must negotiate through the biomedical/ scientific world, and the local/cultural world, and the two worlds do not always converge or agree.

7.3.1 Differences and Similarities Between Biomedical/Scientific/Western/Modern Constructions of SRHR Knowledge and Local Cultural Constructions

The biomedical/western construction of SRHR knowledge shares some similarities and differences with the Zambian local cultural construction of SRHR knowledge owing to their different epistemological paradigms. From the vantage point of the differences, participants argued that it does not make sense to be constantly told by adult women to avoid boys or to stay away from boys because online sources like Google encourages being and/or playing with boys as long as one does not indulge in sexual intercourse. This perspective of the adolescent girls fails to see beyond the prohibitions and consequently do not appreciate the meaning behind the words that the older women give them. For example, Catherine Shipanuka, a grade 9 from Nakatete contrasted what her mother told her from what she got from google: *"My mother told me to avoid being found with boys at any time because you would get pregnant, but google told me that I can only get pregnant*

when I have sex with boys. And these are two different things." Adolescent girls also fail to see that actually; what online sources give them is sometimes similar if not the same as what they receive culturally on playing/mingling with the opposite sex. The objective of the constant talk from older women to adolescent girls about not hanging around with boys or not playing with boys is a way of preventing teenage pregnancies by ensuring that the girls are not found in situations where they can have sexual intercourse with boys and consequently get pregnant. The thrust of this SRHR cultural construction is meant to teach morals and values by warning girls not to indulge in sexual intercourse as this has the potential to leave them pregnant. This is similar to what is found on mobile media as some have mentioned when they say mobile media's encouragement for abstinence is related to the local cultural construction. For example, a Jenipher Nyirenda, a grade 10 from Chongwe said:

> *When we were at school before Covid-19, we learnt that we can protect ourselves from getting pregnant by using condoms, contraceptives, and abstinence, so when I went to YouTube and searched about how one can prevent pregnancy, it just went straight and told me that abstinence is the best. It was a video, and it showed that it is not always that when you use a condom, you will be safe, because sometimes, that plastic can get damaged, and you can get infected with diseases or maybe you can be pregnant.*

Making a contribution to this discussion on abstinence, Anastazia Mukelebai, a grade 12 of Chongwe said: "*I also learnt from mobile media that abstinence is good, and I share this information with my friends.*" Another participant, Isabel Mpandakwasha, a grade 12 from Nakatete shared that she found similarities between the information she got via mobile media and from what is taught culturally:

> *I searched on google about teenage pregnancy the information I got was almost the same as the traditional information, for example, when you come of age you should abstain from sleeping with boys and also if you are just from having menstrual period you have a week or two that are safe days but if you sleep with a man after these days the egg might get fertilized and you end up being*

> *pregnant. I searched on Google, and it was corresponding to what I was told at home when I came of age.*

Additionally, a grade 11 from Kabulonga by the name of Chomba Kumwenda also found some information shared from the cultural perspective corresponding to the biomedical/scientific perspective:

> *As for me when I became of age my mum, okay she didn't sit me down to tell me, she didn't tell me everything, she just said now that you have grown up, you shouldn't have boyfriends, and that when you have sex you become pregnant, and you also contract STIs and other diseases. So, when I searched about such information, it was true. For example, if you don't have protected sex, you can contract those diseases. So, they were relating.*

Some participants were agreed on what they accessed from online sources and what they got from their culture regarding prevention of pregnancy and STIs, although there is a variation on cultural insistence on abstinence, and online sources' (biomedical/western perspective) provision of alternatives such as contraceptives like morning after pill and condoms. While the cultural position is constantly insisting on abstinence by constantly drumming the message of *"don't sleep with boys, don't open your legs to boys, don't hang around with boys,"* it does not provide any alternatives for those adolescents who may happen to find themselves sleeping with boys. On the other hand, the biomedical scientific world acknowledges and encourages abstinence while providing an alternative for those adolescents who find themselves in situations where they have to have sexual intercourse to prevent pregnancy as well as contraction of STIs.

On cleanliness and hygiene during menstruation, both scientific and local constructions are agreed as pointed out by some participants. Mwaba Sicholongo, a grade 8 from Mount Makulu, said: *"As for me what I learnt during ifimbusa [traditional rites of passage], and what I googled was not the same. During ifimbusa, they taught me about a lot of hygiene*, *like bathing."* This was similar to what Bercy Namukamba, a grade 9 participant from Chongwe shared how her mother told her about the importance of hygiene and cleanliness in the context of her coming of age, and that this information was similar to what she accessed from online sources: *"As for me my mother told me how to keep my body clean and when I went on Google, they were saying similar things. And what*

I was told, and what I searched on mobile media relates." This was re-echoed by what was shared by Kasakula Kasonde, a grade 9 of Mt. Makulu said that what she was taught about changing pads frequently during menstruation and keeping oneself clean is similar to what she obtained from online media: *"They taught me about a lot of hygiene during ifimbusa, and it was the same with what I googled."*

In the cultural transmission of SRHR information and knowledge, sometimes explanations and reasons are not provided for statements and/or prohibitions given by adult women to adolescent girls, and this did not bode well with many participants. They said while it was the case that adult women did not give reasons or explanations for certain statements and prohibitions, Google was handy as it gave them detailed explanations and reasons for statements and prohibitions regarding adolescent SRHR issues. For this reason, many participants praised Google. For example, Anabella Mumba (Grade 11) from Nakatete Secondary School said *"researching SRHR information on mobile media is better; for example, society tells you sex is bad, without telling you why it is bad, but when you go to search on Google, it will tell you sex is bad, and provide you with reasons."* In such an experience or sharing, one can see a difference if not a clash of two worlds: the western/scientific that provides all the information in one moment, and the Zambian local culture that allows/invites the recipient of information or knowledge to decipher the underlying meaning on their own. In these differences, one can see that the western/scientific world is instantaneous in providing SRHR knowledge, while the Zambian culture is gradual. The two worlds are different but none better than the other in the objectives they serve.

The differences in the two worlds have to be negotiated by the adolescents, and the adolescent girls who participated in this study are more inclined to embrace the western/scientific/biomedical sources of SRHR information as expressed by Sanka Simukonda, a grade 12 participant of Chongwe *"Google gives you the full and detailed information you need", and "gives you information immediately and explains more than friends and family."* In their quest to check the relationship between locally generated SRHR knowledge through the lenses of mobile media, participants in this study also shared about some things that are unrelated, for example; what constitutes virginity. One participant, Chunga Chitoshi, a grade 10 from Mt. Makulu remarked that according to culture *"if you have lost the hymen, then you have lost your virginity, but Google says there are types of virgins*." Nomsa Kanyembo, a grade 10 participant of Mt. Makulu, zeroed in on

some contradiction between western constructions of SRHR and local constructions on taking painkillers during menstruation. She said that while her elder sister had told her that culturally, it was forbidden to take any painkillers to reduce pain during menstruation because this would make the menses heavy, Google allowed this as a way of managing the pain. Another area of contradiction that was expressed was that of homosexuality as some participants pointed out that according to tradition and culture, same sex marriages are forbidden. For example, Chileleko Hachombwa, a grade 9 participant from Mt. Makulu observed: *"In our traditions, all of us here, they don't allow same sex marriages, same gender, a man and a man, a woman and woman, they don't allow to get married."* This underscores the differences in the understanding of sexuality and gender in the context of SRHR between the western/biomedical world and the Zambian local/cultural world. A further area of contradiction or difference between local constructions of SRHR and western constructions as observed by participants in this study, lies in the usage of taboos, riddles and proverbs by the former while the latter is more direct. In view of the so many riddles, taboos, and proverbs found in the Zambian local and cultural construction of SRHR, the participants in this study preferred the western/biomedical construction in a clear non-appreciation of the local construction as they embraced Google as a source of much of their SRHR information. Google, to some extent, is now slowly taking the place of the traditional grandmother in the sphere of SRHR knowledge for adolescent girls.

7.4 GOOGLE AS A GRANDMOTHER

The participants in this study showed a clear preference towards Google for access to SRHR information as they generally expressed their dissatisfaction towards receiving information from adult women as well as their friends. While some participants refer to Google as 'Uncle Google' according to what is common among young in Zambia, I refer to Google in this chapter as a 'new grandmother' because of the preference of Google to the actual grandmother by participants in this study. The participants embraced Google for various reasons as demonstrated in several statements across the different discussions. For example, Chanda Kapwepwe, one participant from Kabulonga Girls (grade 9) said: *"I am more open to Google than to my family members except for my grandmother. When I want to search for something, I just go to Google, but when my grandmother is around, I go to ask her."* Another participant, Mwendabai Habajane, a grade 11 from Mt. Makulu, shared: *"Google gives me things easier than my parents.* Others embraced Google due to its non-usage of riddles, and that it goes straight to the point. For some, it is because Google has a

world-wide reach, while for others, it is because Google brings correct answers and does this quickly and immediately. Google was hailed by many as possessing more knowledge than grandmothers and mothers, and that it provided full information compared to traditional and cultural sources. Another point raised was that Google provides answers directly as compared to grandmothers who provide information indirectly. Grace Halwindi, a grade 12 from Nakatete remarked that *"Google is better because it provides views from different people.* For Penelope Banda, a grade 12 participant of Kabulonga Girls, "*Google is an alternative source of SRHR information to a culture that is slowly fading away."*

In the midst of the almost total embrace of Google as a new grandmother on SRHR issues, some participants felt Google was overrated.

7.4.1 Google's Overrated-ness in the Eyes of Some Adolescents

Some participants took a cautious position when it came to dealing with Google as a source of SRHR information, as one Mofya Kangwa, grade 10 from Mt. Makulu observed that *"Google might not give you truthful information on traditional things."* Another participant, Alphonsina Kabanda*,* grade 10, Kabulonga Girls, criticised Google as not having everything, but still praised it for having something to offer. Google was also criticised as some participants felt it goes too far in providing information that does not consider the age of the consumer of the information. Put differently, Google was seen as age-insensitive in its provision of SRHR information. In praise of Google, some participants as shown above said Google provides answers/information directly, but other participants felt that sometimes the words that Google brings are too advanced for their level of understanding.

7.5 Discussion on the Theme: DRINKING FROM TWO FOUNTAINS: CULTURAL AND MODERN SPACES IN ADOLESCENT GIRLS' SRHR CONVERSATION

This chapter relates to the previous chapter in that while the previous chapter focuses on Mobile Media as a source of SRHR information, this chapter goes a step further by focusing on the relationship between online and offline sources of information for adolescent girls in Lusaka, Zambia in the context of Covid-19. The chapter therefore discusses the findings from the data which showed that both cultural and biomedical/scientific sources of SRHR information and

knowledge play a role in the lives of adolescent girls. In the findings, it emerged that the Pre-Covid-19, and the Covid-19 experiences were similar with regard to mobile media and accessing such information from adult women as well from friends. This is so, although the Covid-19 period saw the heightened use of mobile media due to prolonged school closures and lockdowns. In the pre and the Covid-19 pandemic periods, adult women in the lives of the adolescent girls played a significant role in imparting SRHR knowledge on the girls. Given the role of the adult women in imparting SRHR Culturally constructed knowledge in adolescent girls as the FGDs demonstrated, this discussion looks at how adolescent girls accessed SRHR knowledge and information through both the cultural sources and biomedical/scientific sources, and how this is going to continue in the post Covid-19 era.

As the participants were discussing access to SRHR information via mobile media during Covid-19, it emerged that there is a way in which adolescents continued to receive SRHR knowledge and information from significant adult women: grandmothers, aunts, and elder sisters in their lives alongside their engagement with mobile media. The sourcing of SRHR information from adult women who represent the cultural space in the Zambian setting is the norm rather than an exception. This reality is also expressed by Kapungwe (2003), as indicated in the literature review of this study. The reality of adolescent girls accessing information in both mobile media and culture aligns with the construct of relatedness in SDT (Deci and Ryan, 2000) given that adolescent girls were able to find support for SRHR information during Covid-19, not only on mobile media, but also through the significant adult women in their lives. In a sense, adolescent girls expanded the idea of relatedness from peer to peer support and engagement online to include adult women offline. The study findings revealed that in Zambia, there is a pattern of adult women taking centre stage on issues of SRHR in the lives of girls, and this role did not stop in spite of the Covid-19 pandemic. The findings in the data revealed that locally, SRHR knowledge is culturally constructed, and adult women, because of sharing the same gender with adolescent girls, are culturally placed to carry out this significant role of passing on this knowledge to the girl child. However, due to cultural taboos surrounding sexual reproductive health issues, girls are not allowed to discuss these issues with men (Kapungwe, 2003). This position was widely reiterated by the participants in this study. Although Kapungwe (2003) argues that adult women are responsible for passing on SRHR information and knowledge to adolescent girls, he points out that it is considered taboo for grandmothers and mothers to be present during the initiation of

adolescent girls as they reach puberty. However, the findings of this study revealed that grandmothers were predominantly involved in the passing on of SRHR information and knowledge to their granddaughters.

The passing on of SRHR information by adult women to adolescent girls represents the role of culture in the lives of the girls, and its consequent influence on the decisions they make for their health as they consume SRHR information from mobile media. In a sense, culture is a prism through which they view the SRHR information they access via mobile media. This, according to Gilliam et al. (2019: 255), is reflected in participatory culture as it beams its light on social and cultural contexts of girls as they access SRHR information through mobile media since they are influenced by societal norms, family expectations, peer relationships. Such influence has a bearing on the adolescent girls' ability to make informed decisions about their health since the cultural background, cultural beliefs and values of the adolescent girls shape their understanding and interpretation of SRHR information (Savage et al., 2019: 255). From this perspective, participatory culture is not merely about individual creativity, and consumption of media content, but about the social and cultural contexts that shape and are shaped by cultural practices (boyd, 2016: 12).

The transition into puberty or onset of puberty which the FGD participants commonly referred to as Coming of Age is a very significant stage in the lives of adolescent girls. This stage is referred to as adolescence and it is a phase between childhood and adulthood during which individuals undergo rapid physical, cognitive and psychosocial changes (Singh, 2019). This phase is also a stage in which individuals are trying to find their identity (Erikson, 1968). Adult women in the lives of adolescent girls take this stage very seriously and therefore take time to pass on information and knowledge through instruction in terms of how the girls should conduct themselves now that they have reached a stage in which sexual intercourse with a boy could spell pregnancy. With so much talk around warning girls not to get pregnant, the aspect of menstruation and how to manage oneself as an adolescent girl who is having this experience for the first time, it emerged that before the adolescent girls come of age, not much is done to prepare them for their first experience of menstruation. This study revealed that many girls hardly have knowledge or information about menstruation at the time they reach puberty, and this leaves them emotionally disturbed, and psychologically troubled. Such findings have a resonance in published literature. For example, it is observed that before menarche, many girls hardly have information about sexual reproductive

health, because such information is culturally only supposed to be given to them once they reach menarche (Lahme and Stern, 2017; Rasing, 2021; Njee *et al.*, 2024). Furthermore, this is expressed by Lahme and Stern (2017); Chinyama *et al.* (2029), and Njee, Imeda, Ali, Mushi, Mbata, Kapala, *et al.*, (2024) that in many countries, a lot of girls do not possess sufficient accurate health information at the time they have to prepare mentally and physically for the onset of their menstrual periods. This has potential to bring embarrassment on the girls as they do not know how to manage the menses once they start due to lack of knowledge on the subject. It could also possibly lead to girls viewing this experience with a lot of fear and superstition as shown in this study. Such experiences are reflected in a study done by Chinyama *et al.* (2019), in which some girls revealed that they learned about menstruation at menarche, and the experience evoked mixed emotions such as worry, sadness, and fear. The significance of such experiences is that becoming a 'woman' embodies various emotions, and therefore it is important for the girls to be informed and prepared before reaching menarche. Due to this SRHR information gap on menstruation and other issues related to puberty, some participants in this study resorted to using mobile media to access such vital information, and they shared such information online with others thereby creating a participatory culture. Participatory culture was at play as they actively engaged with mobile media SRHR content and shared this content with their peers, and this reflected new forms of participation and collaboration in what Jenkins (2006: 3) refers to as convergence culture.

In the literature review as observed by Kapungwe (2003) girls shared with their mothers or relatives once they observed signs of menstrual onset, and the mothers or relatives contacted initiators to commence the process of initiation. However, this is not in agreement with the findings of this study which showed that participants confided in their friends when they started their menses. In most cases, according to the participants, their mothers were only informed later. In fact, many participants lacked health information at the time their menarche arrived, and they were ill-prepared and embarrassed, shocked, scared, and confused by the experience as already explained above. The experiences of the participants in this study were similar to the findings in the study conducted by Lahme and Stern (2017) in Zambia's Mongu district of Western province. The participants in Mongu expressed experiencing confusion and anxiety as a result of having limited information about menstruation before menarche. Such experiences are confirmed by what are suggestive of widespread adolescent girls' experiences around this important area of their reproductive health. It speaks to the deliberate withholding of timely and accurate sexual

reproductive information about menstruation from adolescent girls due to rigid conservative cultural traditions that are prevalent in many countries including Zambia (Lahme and Stern, 2017).

It is upon reaching puberty that adolescent girls receive instructions from adult women on SRHR issues, including, how to manage themselves whenever they are having their monthly periods (menstruation). However, the appropriate time would be before they reach menarche as this would better prepare them in advance. In general, they are taught how to manage their lives as is demanded of them by society. Instructions to the girls are given largely in the form of riddles, proverbs and taboos whose interpretation the girls have to do to decipher the meaning (Kapungwe, 2003; Lahme and Stern, 2017; Rasing, 2021). Culturally, the passing on of SRHR information and knowledge by adult women to adolescent girls is done offline and in seclusion, but this can be considered not private when compared to adolescent girls accessing SRHR information online without the involvement of adult women. This situation plays against the theoretical concept of autonomy in SDT (Parent, 2020) as the girls do not get to have the power to choose what SRHR information they need, and who to obtain it from. Additionally, leaving it to the girls to interpret the riddles and proverbs to understand what the women are communicating can sometimes leave the girls confused and frustrated, and this is against relatedness in SDT which espouses an open environment of expression and sharing among participants (Parent, 2020). In the face of such limitations in obtaining complete and explained SRHR information from adult women, the study found that adolescent girl's resort to mobile media from which they say they get detailed and elaborated information.

In today's world, as the adolescent girls receive SRHR culturally constructed knowledge and information from older women, they are at the same time consuming SRHR information from online sources via mobile media. This situation creates a demand on adolescent girls to negotiate two worlds: locally culturally constructed SRHR knowledge and the Biomedical/Scientific western constructed SRHR knowledge. In the process of dealing with the two worlds, it emerged in the FGDs that as the participants negotiated these two worlds, they are generally more inclined towards the scientific/biomedical western constructed SRHR knowledge as they navigate Google and other mobile media applications searching and sharing SRHR information. This as the case may have been, there was no escaping the reality that how the adolescent girls interpret the SRHR information from mobile media is influenced by their social cultural context as argued by

Nightingale (1996:18) in her view of participatory culture. She argues that the idea of active audience suggests that viewers have complete control over their interpretation of media messages, but in fact their interpretations are predisposed to their social cultural contexts. This means that the SRHR content accessed by adolescent girls via mobile media platforms such as YouTube, Google, Facebook is to some extent influenced by their social and cultural context in which the passing on of SRHR information to girls is the preserve of adult women. It can be deduced from this that the social cultural context has an indirect or direct influence on how the adolescent girls interpret mobile media SRHR information and how they make decisions based on such information. The societal norms, cultural values, gender roles, sexual norms, cultural beliefs, and power dynamics shape how adolescent girls in interpreting the SRHR information access via mobile media (Nightingale, 1996:22). This position is augmented by National Wide Project (1995) in its argument that cultural backgrounds, social environments, and personal experiences are crucial in shaping the meaning of texts. In the case of this study, the text is the SRHR information accessed on mobile media by adolescent girls. The situation of preferring mobile media as source of SRHR information is not unique to the adolescent girls in this study. Published literature revealed that this reality is also reflected in the Global North among young people who also prefer using websites and search engines, Apps and platforms to search for health information (Lupton, 2021). Like adolescent girls in Zambia, young people in the Global North are engaged in both online and offline access of health information since they resort to consulting trusted adults to interpret certain information acquired online that they find difficult to understand, and they value face-to-face interactions with trusted adults who also provide alternative sources of health information and support (Lupton, 2021).

The accessing of SRHR information from both the online and offline sources happens either sequentially or simultaneously while adolescent girls engaging actively as participants, but also as an audience. Such a situation has a sense in which participatory culture is at play particularly when adolescent girls are not passively receiving information as an audience, but actively engage as participants (Bruns, 2008). However, in the Zambian context, culturally, adolescent girls are recipients of SRHR information and knowledge from adult women in a manner that does not allow girls to participate through asking questions or indeed sharing what they may have learnt from school or friends or mobile media. The role of adolescent girls, especially during initiation ceremonies is simply to listen to adult women. Such a situation does not promote the realisation

of the constructs of relatedness and competence in STD (Parent, 2020; Deci and Ryan, 2000) in which relatedness implies communication that promotes both sharing and listening from all participants, and competence which concerns itself with effective interactions with the environment. Furthermore, these cultural practices that do not promote the participation of adolescent girls or allow them to express their opinions, ask questions, and be listened to do not facilitate the realisation of the construct of autonomy in SDT (Smailhodzic and Attema, 2016) as such practices promote complete control over adolescent girls rather than reduce such control. Allowing some form of control for adolescent girls would allow them exercise agency and empowerment in seeking and sharing SRHR information thereby providing them tools to challenge the traditional power dynamics (du Gay *et al.*, 1997). This would facilitate free self-expression by adolescent girls and bring to life a participatory culture that has relatively low barriers for adolescent girls and create string support for creating and sharing their creations of SRHR content with others (Jenkins, 2012).

Literature review established that rites of passage or initiation ceremonies were said to be prevalent in all ethnic groups in Zambia, and that it is during these ceremonies that girls receive sex information and knowledge from adult women who are neither their mothers nor grandmothers (Kapungwe, 2003). These rites of passage that are performed at the onset of menstruation expose adolescent girls to things such as taboos around menstruation and fertility, sexual matters, and womanhood (Rasing, 2021). In some ethnic groups, for example, the Bambas of Northen Province of Zambia, the onset of menstruation is a cause for celebration as it is seen as a gift of sexuality to the girl from the ancestors, and it denotes fertility (Rasing, 2021). However, in this study, the participants hardly mentioned formal initiation ceremonies. During FGDs, the participants mostly talked about receiving sex information and knowledge from their grandmothers, mothers, aunts, and occasionally from their sisters in a non-formal manner. Although these were not occasions specifically marked as initiation ceremonies, they served the same purpose as initiation ceremonies by providing adolescent girls with sex information when they came of age. The differences between what is revealed in the literature and what the FGDs in this study revealed could be down to changing times and Western influence as argued by Rasing (2021). She contends that western education, the introduction of different religious denominations and exposure to the media, the proliferation of Non-Governmental Organisations (NGOs), and globalisation are among the factors that have led to the disappearance of many aspects of initiation ceremonies, for example secluding

girls for days to perform rites of passage. The findings in this study show a shift from when girls would be secluded and kept in the house for days for initiation purposes to more brief informal episodes where adult women pass on sex information to adolescent girls.

In terms of content, what rites of passage impart on the adolescent girls bear some similarities and differences to what is given by grandmothers and mothers at home as shared by participants in this study. According to Kapungwe (2003), initiation ceremonies expose girls to information of how to conduct themselves sexually, how to raise a family, and how to perform during sexual intercourse, about sexual relationships, personal hygiene especially during menstruation, abstinence from sex before marriage, and faithfulness to the husband once married, how to pleasure the man during sex, and obeying the man's demands for sex whenever he wants. Another feature of initiation ceremonies is that the initiators: women who are selected based on their good conduct and reputation in the community instruct the adolescent girls about how to please their husbands by dancing during sexual intercourse, and how to ensure that their vaginas are dry because Zambian men prefer dry sex. In this study, the FGDs revealed that grandmothers and mothers expose girls to information on how to conduct themselves in respect of keeping their virginity, and how to take care of a home, how to keep oneself clean during menstruation. Not much was mentioned in the FGDs about how to conduct themselves sexually, or how to perform during sexual intercourse. With emphasis placed on virginity, and prohibitions of sex before marriage, it makes logical sense that the grandmothers and sometimes mothers and aunts did not expose their girls to information about how to perform during sexual intercourse. Such information is given at a later stage when the girls would be getting prepared for marriage which is another milestone in the life of a girl. Although there is with-holding of information about how to perform during sexual intercourse until during marriage preparation, many girls already have their sexual debut before marriage as has been seen in the literature review, and as argued by (Rasing, 2021).

The emphasis in traditional initiation ceremonies on girls/women giving sex to pleasure the man for the man's enjoyment, and an instruction that girls have to give in to the sexual demands of a husband whenever he makes them is a direct affront to the girl's/woman's sexual reproductive and health rights as it robs them of their right to decide when to have sexual intercourse, and when to reproduce. It further robs the girls/women of their right to enjoy sexual intercourse since they have to do so to satisfy and pleasure their husbands. The few participants in this study who mentioned

initiation ceremonies did not appreciate such ceremonies as they viewed them to be old tradition and were categorical in stating that they would not want to practise these traditional ceremonies.

Additionally, literature revealed that condoms are not encouraged during initiation ceremonies as they are deemed to be foreign, and not supportive of the enjoyment of sexual intercourse, promotes sexual immorality, and prevents the fulfilment of reproduction as the main purpose of sexual intercourse (Kapungwe, 2003). Although the FGDs revealed a similarity with literature review on the point of condoms not being encouraged or even mentioned at all by their grandmothers and or mothers, no reasons were advanced for the silence on condom use. However, among participants in this study some had an appreciation for condoms, for example, Angela Kambilombilo from Mt. Makulu (grade 11) said that while her grandmother told her that she would get pregnant once she had sex with a boy, she checked with Google which revealed to her that she would not get pregnant if she used a condom during sexual intercourse with a boy. This demonstrates the disposition of the girls not to consume SRHR information from adult women without verifying it or checking if at all online media sources have similar or different information.

Talking about verifying SRHR information, this study revealed that mobile media provided you the facts without ethical judgement. Culturally, family planning and contraceptives were clearly off the table for adolescent girls, because time was not ripe. In the Zambian culture, there is no point in acquiring SRHR knowledge for itself if you were not planning to use it. For many adolescent girls, as has been discussed in Chapters 5-7 mobile media is a limitless oasis of SRHR information for issues that are culturally considered as taboo. We see this in statements such as *"…if I have syphilis, and I don't want to share with anyone, I can ask Google and ask for what type of medicine I need to take for it*" (Grade 11, Chongwe Secondary School). Or as put across by another grade 11 participant from Nakatete Secondary School: *"For me my friend was pregnant and had fungal so I would get information on Facebook on how she can get cured. [I would check] what type of medication and what dosage, so that the pregnancy is not endangered*." Such statements, questions and the revelations in our literature review (chapter 2) underscore the reality that adolescent girls are engaging in premarital sex, and will still need information to prevent pregnancy, STIs or to abort or treat the STIs. Given that this information is not supplied culturally, and yet it is needed by adolescent girls, mobile media has proved to be their space of solace as captured in Chapters 5-7 of this thesis.

The study also revealed that adolescent girls were not comfortable discussing SRHR issues with their male counterparts, and that adult males were not allowed to talk to adolescent girls about sexual issues. This underscores the desire for privacy and confidentiality when adolescent girls are dealing with issues of sexual reproductive health and rights. It also shows that even as they navigate online sources for SRHR, privacy and confidentiality are of primary concern. This concern for privacy and confidentiality and the fear that what they put out on social media could be accessed by other people makes adolescents to be very careful about what they post on social media (Duffy and Chan, 2018). This desire speaks to the construct of autonomy in SDT wherein adolescent girls desire to have the power to choose who, how, where, and when to engage or interact with others (Parent, 2022).

Conclusion

This chapter set out to address question 5 of the research: How can the experiences of adolescents with mobile media translate into a post Covid-19 context for access to SRHR Information? The data and discussion of findings in this chapter reveal that while mobile media usage increased during Covid-19 pandemic, adolescent girls were also reliant on SRHR information from the cultural spaces. It is true that schools were closed, and youth friendly corners could not be accessed due to public health measures arising from Covid-19, but the cultural spaces which are often limited to family members (grandmothers, mothers, aunts, elder sisters) and trusted women in the community were still accessible to adolescent girls. Adolescent girls had divided views about cultural spaces. While some girls did not have a deep appreciation as they deemed them to be old fashioned or outdated, others still appreciated them on the basis of some similarities with mobile media. Mobile media was widely appreciated for its affordances, and for this reason it is generally more preferred to cultural spaces. The study revealed that going forward beyond Covid-19, adolescent girls will continue to prefer mobile media to physical or cultural spaces for accessing SRHR information, however, the physical spaces will still be used as and when necessary. With the return to normal interactions, schools, clinics, friendly corners, community mobilisations, infotainment among others are a welcome resource for adolescent SRHR information in Zambia.

CHAPTER EIGHT

8.0 GENERAL CONCLUSION AND RECOMMENDATIONS

8.1 Introduction

This concluding chapter brings out what this study set out to investigate and summarises the main findings of the research. It also makes recommendations based on the identified knowledge gaps. The study set out to investigate the role of mobile media in aiding adolescent girls of Lusaka, Zambia to access SRHR information during the Covid-19 pandemic. During the pandemic, the adolescent girls were at home fearing to contract the coronavirus, their movements were restricted as part of the Covid-19 prevention measures. They could not visit health centres or other sources of SRHR information such as youth friendly corners. With the prolonged closure of schools which curtailed the opportunity for girls to acquire comprehensive sexuality education, and with restriction in movements for girls to access youth friendly corners, and health facilities for SRHR information and services, an SRHR information gap was created which adolescent girls had to fill. To fill this information gap, the girls had to find alternative sources of SRHR information, and mobile media platforms, applications, and search engines provided such an alternative, albeit with its own challenges.

This chapter draws insights from all the previous chapters to present a summary of the main findings of this study and propose future areas for research. It begins by looking at the overall aim of this study, and the research questions applied. It also provides some limitations of the study. before summarising the research findings. Lastly, it provides suggestions for possible areas of future research.

The study explored the role of mobile media in adolescent girls' access to SRHR information during the Covid-19 pandemic in Lusaka, Zambia. It focused on 4 selected secondary schools in 4 different districts of Lusaka Province. This study utilised the constructs of participatory culture namely: networked publics, spreadable media, and convergence culture; and those of SDT, namely: autonomy, relatedness, and competence. As can be seen in chapters 6 and 7, the constructs of relatedness, autonomy, and networked publics demonstrated that adolescent girls express themselves freely, interact freely and openly as they engage with mobile media in search of SRHR information, learning and education. Through such engagements, they create friendships, and find connectivity that promote peer to peer support, especially for adolescent girls who find it difficult to express themselves on a face-to-face basis (boyd, 2014; Jenkins, 2006; Deci and Ryan 2000;

Parent, 2020). The implication of this is that mobile media has potential to provide adolescent girls with spaces from which they can exercise agency and empowerment by freely, and privately seeking SRHR information, and consequently challenge the traditional power dynamics (du Gay *et al.*, 1997). This is crucial in a country like Zambia where culture does not promote open discussions about SRHR issues as this is considered taboo especially among adolescents. Additionally, this challenge to the traditional power dynamics is important in a culture that encourages adolescent girls to simply listen and embrace whatever SRHR information is given to them by adult women without allowing the girls to contribute or challenge the information they are receiving. This situation is worsened by the fact that most of the information imparted by the adult women on adolescent girls is shrouded in myths, riddles and proverbs. In the absence of quality conversations wherein adolescent girls are participants, it is difficult for them to decipher the meanings behind the riddles, myths, and proverbs. In such circumstances, the possibility of misinterpreting, and consequently misapplying the SRHR information received becomes high, and this could endanger the health of the adolescent girls rather than safeguard it.

This study used a qualitative research design and FGDs as methods of data collection. The selection of this research design was to understand the experiences and perspectives of adolescent girls as they engaged mobile media to access SRHR information during Covid-19 pandemic. This was to help draw context specific experiences of girls in the Lusaka Province of Zambia. This aligned with the selected paradigms of constructivism and interpretivism as these aim at comprehending human behaviours and social phenomenon. Furthermore, this aligned with the ontological position that views reality as subjective, that reality is constructed and therefore there is not a single reality, but multiple realities. Consistent with this ontological position, the participants and I were all involved in the construction of knowledge.

In this study, data was collected through FGDs conducted in the 4 selected schools: Kabulonga Girls Secondary School (Lusaka District), Nakatete Secondary School (Kafue District), Chongwe Secondary School (Chongwe District), and Mount Makulu Secondary School (Chilanga District). The collection of data centred on the experiences of adolescent girls as they engaged with mobile media during Covid-19 pandemic. The findings of this study were then analysed using reflexive thematic analysis by Braun and Clarke (2020). The study was guided by the following research questions:

1. How did adolescent girls in the four selected schools in Lusaka, Zambia, employ mobile media to access information on SRHR during Covid-19 pandemic?

2. What were the affordances and limitations of mobile media to accessing SRHR information during the Covid-19 pandemic?

3. What were the main sources of SRHR information for adolescent girls on mobile media during the Covid-19 pandemic?

4. How did mobile media participatory activities of adolescents enhance their access to and sharing of health information on SRHR during Covid-19?

5. How can the experiences of adolescent girls with mobile media translate into post-Covid-19 context for access to SRHR and use of information gained?

8.2 Summary of Research Findings

The findings of this study largely align with existing literature on the role of mobile media in health communication during crises but highlight unique challenges in the Zambian context, such as the digital divide and cultural sensitivities around SRHR. The interplay between traditional and digital information-seeking behaviours underscores the need for a hybrid approach to SRHR education. This study has a number of findings, and based on these findings, it can be concluded that mobile media played a significant role in adolescent girls' access to SRHR information during the Covid-19 pandemic in Lusaka, Zambia. This demonstrates that mobile media has potential to bridge the SRHR knowledge gap in contexts where face to face engagement is either impossible or replete with barriers and limitations.

The first research question explored how adolescent girls in the selected secondary schools employed mobile media to access SRHR information during the Covid-19 pandemic. The data demonstrated an increase of mobile media engagement by adolescent girls during Covid-19 pandemic than they did in the time before Covid-19. This was because the girls spent most of their time at home and had more time to use mobile phones to search for SRHR information among other topics of interest. The girls searched for SRHR information online, shared such information, held discussions on SRHR related issues with peers via online chat groups, and subsequently drew emotional and psychological support from each other. According to the participants, mobile media provided them with platforms for deep and open engagements as they felt safe and secure, and in

control of their conversations. The girls expressed a sense of satisfaction with mobile media as they obtained detailed SRHR information, and explanations to the questions on SRHR topics that plagued their minds.

Based on such experiences of participants, this study concludes that mobile media provides opportunities for adolescent girls to be free and open to discuss SRHR issues without cultural inhibitions, and the unwelcome judgemental attitudes of adults. This suggests that there is need to create more spaces and opportunities where adolescent girls can be free to engage with SRHR issues among themselves without fearing to be reprimanded or judged as being uncultured.

The second research question explored the affordances and limitations of mobile media. This study revealed that through mobile media, adolescent girls were able to reach their friends and colleagues online to share and discuss various issues concerning SRHR. Mobile media enabled adolescent girls to form communities of support and to deepen their understanding of SRHR issues such as: menstruation, teenage pregnancy, abortion, STIs, contraception, and child marriages. This study argues that mobile media filled the SRHR information and knowledge gap created by Covid-19 induced school closures, movement restrictions and lockdowns. However, this was not without limitations. Adolescent girls experienced limitations in their engagement with mobile media as many of them did not own mobile phones, as such they had to rely on borrowed phones from their parents, guardians, and elder sisters, and in some rare cases their elder brothers. This limited how long and how often they accessed SRHR information via mobile media. Furthermore, many participants reported having bad internet network, or no network at all, depending on where one stayed, or the mobile network provider they were using. Other participants reported that data bundles were costly, and since they were not working, they found difficulties in buying data bundles. Loadshedding was another limitation as some places would go for days without electricity for them to charge mobile phones.

Given the affordances and limitations of mobile media to adolescent girls' access to SRHR information during Covid-19, this study suggests that mobile media is vital to the provision of SRHR information to adolescent girls in the context of Covid-19 and will continue to be heavily relied upon beyond the Covid-19 pandemic. However, the revealed limitations must be addressed if the potential of mobile media is to be fully realised. For example, the government has to invest in alternative sources of electricity to avoid prolonged loadshedding to allow people especially

adolescents to have access to charged mobile phones for their SRHR information needs. In addition, the government and other stakeholders can invest in building infrastructure to improve internet services in terms of accessibility, speed, and make the cost of data bundles more affordable especially for the vulnerable groups like adolescents who are not earning any income.

The third research question was about the main sources of SRHR information for adolescent girls during Covid-19 pandemic. The study revealed that mobile media sources such as Facebook, YouTube, TikTok, WhatsApp, and Google were mainly used to access SRHR information during Covid-19. Interestingly, in addition to these sources, adolescent girls also continued to access SRHR information from significant female adults in their lives such as mothers, aunts, elder sisters, and especially their grandmothers. However, most of the participants shared that they were more comfortable, and freer to use mobile media than to get information from adult women. They valued mobile media SRHR information more than they did the information they received from the women. They appreciated mobile media for its privacy, interactivity, accessibility, and ease of use. They were happy as they did not only obtain information, but were able to share content, and in some cases create content both video and text which they shared on platforms like Facebook, WhatsApp and TikTok. The most used search engine was Google, followed by YouTube. Google was celebrated for its in-depth information and explanations on SRHR issues. For their interactions with peers, adolescent girls took to Facebook and WhatsApp where they felt particularly free and safe to express themselves, listen to others, and be listened to.

From such findings, one could almost hear a cry from adolescent girls for secure and private spaces exclusive to them where their voices could count for something, and their opinions respected. In my view, this challenges the culture where adolescent girls are simply recipients of already packaged information and knowledge. It is a call to creating a culture where adolescent girls are active participants in the creation of a participatory culture that accommodates their voices especially on SRHR issues to determine better decisions for their health and wellbeing.

While mobile media was held as safe and secure, some participants expressed concerns around exposure to pornographic content, verbal abuse, and cyberbullying. Although this was not our principal focus, it became clear from the findings that mobile media use, like all technology, came at a price. It came as a double-edged sword cutting both sides. There was the obvious up-side. Like a variety of technology, mobile media has made life easier, more than ever in a way impossible to

explain to Millennials, also known as Generation Y (often shortened to Gen Y) or Generation Z (often shortened to Gen Z), colloquially known as Zoomers. In Zambia, very few adolescents have seen a landline or a public telephone booth. The lucky ones were born with a smart phone in their lap for cartoons such as Baby Shark. Mobile media has made it possible to connect with people all over the world. With the rise of social media and messaging apps, they can now communicate with friends, family, and colleagues in real-time, regardless of where they are located. Once again, as tabulated in chapter five, this was the allure of why our adolescent girls accessed mobile media for information on SRHR. They had to be coaxed to acknowledge mobile media or technology's down-side. While technology has made it easier to connect with others, access information, and improve medical care, it has also led to cyberbullying, and technology addiction which some participants acknowledged. But within the experience of adolescents, apart from cyberbullying, there were the ever-present dangers of being exposed to pornography, abusive language, and inaccurate SRHR information. As adolescent girls' access SRHR information on mobile media, there is no guarantee that they will use this information appropriately and responsibly because for some, it is time to experiment or put to action the information they acquired by having sexual intercourse with boys. This study contends that mobile media remains a good platform for adolescent girls' access to SRHR information, however, there is need to provide safety nets to protect them and other vulnerable groups from the anguish that is caused by challenges as such as cyberbullying, exposure to pornography, and inaccurate information among others.

The fourth research question explored how mobile media participatory activities of adolescent girls enhanced their access to and sharing of health information on SRHR during Covid-19. The participants in this study revealed how Covid-19 prevented them from face-to-face interactions with their peers, and also from meeting in clubs at school where they used to discuss SRHR issues. Owing to this situation, they made use of mobile media to discuss and share their SRHR experiences, concerns, and information on the subject. Many participants were drawn to mobile media as they regarded online spaces to be private. However, some participants felt inhibited by the fears that some known community members especially adults (people who they live with or those they go to church with) could be present on some Facebook groups and could either report them to their parents or guardians regarding what they may share in these groups. They feared that if such was to happen, they would be stigmatised in the community or at church. Due to such fears, some participants were either too careful to share or decided not to share at all. To address this,

rather than use Facebook, some participants resorted to WhatsApp as they felt it was more private and therefore more secure, and reliable. The study also revealed that access to SRHR information was enhanced as the adolescent did not need to leave the confines of their homes to access information. The fact that mobile media has several networking sites, and search engines provided not only various avenues for SRHR information access, but also a plethora of content that adolescents could access.

While mobile media was held as enhancing access to, and sharing of SRHR information among adolescents during the Covid-19 pandemic, the study also revealed concerns about misinformation, and disinformation. Since mobile media provides open spaces where people can share different content on different subjects, it is almost impossible to regulate what gets to be shared. Some people use mobile media to spread wrong information while others share content with intent to deliberately mislead mobile media users. My suggestion would be that the government and other stakeholders invest in e-health literacy to equip adolescent girls with tools and skills to properly evaluate the SRHR information they access, judge which information is authentic and appropriate, then act accordingly in the interest of their health.

The fifth and last question investigated how adolescent girls' experiences with mobile media could translate into post-Covid-19 context for access to SRHR information. The study revealed that post-Covid-19, adolescent girls will continue to use mobile media for access to SRHR information while at the same time utilising the clubs at school, school matrons, and classes on comprehensive sexuality education. The study also revealed that the presence of adult women who represent the cultural space for SRHR information will remain a factor in adolescent girls' access to SRHR information. This is not withstanding the many participants who view such a cultural space as backward and old fashioned. The implication of this is that adolescent girls will have to continue to navigate two worlds: the modern/western world (mobile media) and cultural, represented by adult women.

This situation reveals a phenomenon of adolescent girls inhabiting two SRHR spaces: cultural and modern. The two spaces are sometimes conflicting. For example, from their mobile media search, and sharing, adolescent girls might be bombarded with ethics-neutral attitudes to sex outside marriage, but culturally, this is a taboo subject as observed in the myths and proverbs that such topics are couched in within the cultural space. While sex outside marriage is a taboo subject, little

or no consideration is paid in many instances to the illegality of child marriage with all its consequent negative effects on the girl, and not much. There is also little or no concern about the girl who is sexually active or one who is likely to find herself in a situation where she wants to or is coerced to have sexual intercourse. This is seen in the insistence by adult women to adolescent girls on no sex outside marriage, do not play with boys, and the outright discouragement of using condoms. Culturally, as captured in chapters 7 and 2, there is an insistence on the virginity of the girl before getting married, and yet the reason for abstinence from sex before marriage is often nothing to do with a girl's autonomy over her own body such as the 14-year-old girl we met in chapter 4 who was chronicled in Gloria Steinem's documentary (Steinem, 2016). She was forced into marriage where she was likely to be a maid for all intents and purposes and was required to render the marriage debt of pleasing sexually her significantly older husband. Tradition required that she was a virgin before marriage. In some Zambian traditions, it would have to be proved with blood evidence that her husband had broken her hymen, but no test of virginity is ever administered to the husband. It is as if for the man, practice makes perfect. If a girl were to discover in her mobile media search on SRHR information that this was an infringement of her rights, there is little or nothing she can do about it. In this case, while adolescent girls will continue to inhabit two worlds: modern and cultural, they will always have to deal with some of the conflicts that arise from the two worlds.

Both the cultural and modern/western spaces of SRHR information have their own strengths and weaknesses, and therefore they can complement each other. Such complementarity can be seen in some of what the participants shared. A Grade 12 participant of Mt. Makulu tells of how she helped a friend who was pregnant using both cultural space and the modern/western space (mobile media):

> *I got information from my friends, such as my neighbour. My pregnant friend was experiencing some discomfort, so I took her to my neighbour who was older than both of us. She explained to us that the discharge from my friend's vagina was a sign of labour commencement. From there, we went to the clinic where we were attended to by the nurse in-charge of the labour ward who also explained to us that if there is some discharge from the vagina, and slippery fluid from it, it means one is in labour. From mobile media*

> *we sought for more information about my friend's condition. We compared the two sources of information — what we had been told by my neighbour and the nurse at the clinic and what we found on mobile media — each item of information was the same as the other.*

In the urban and peri-urban areas, the locales of our research, our participants tended to agree more with the modern/western spaces embodied by mobile media, but at the same time still accessed SRHR information from the cultural spaces. This speaks to areas of complementarity in the two spaces, although some areas remain conflicting. The conflicting areas are a source of need for on-going dialogue between the cultural space and the modern/western space to create an environment in which adolescent girls can benefit more from both spaces. This thesis does not provide a pathway to how such a dialogue should be conceived or carried out but proposes that this could be an area for future research by interested scholars.

8.3 Implications and Limitations of the Study

The findings of this study bear some implications for the field of media and culture. This study is one of the first in the Zambian context to explore the role of mobile media in adolescent access to SRHR information during Covid-19. Therefore, it contributes to knowledge on the potential of mobile media as a space for adolescent girls to openly and freely search and share SRHR information especially in societies like Zambia where discussions on sexual matters particularly among unmarried adolescents are considered taboo.

Through its findings, this study has made a contribution to mobile media studies in the global south by revealing experiences of Zambian adolescent girls that speak to the potential of mobile media to change their social and cultural dynamics in engaging with issues that pertain to their health. This study showed that mobile media communication plays a significant role in shaping the social and cultural aspects of adolescent development as it provides young people with opportunities to actively participate in meaning-construction and creation of a participatory culture through mobile media platforms. Furthermore, by focusing on mobile media and adolescent access to SRHR information, this study has made a contribution to knowledge on studies in the global south about how adolescent girls make sense to, and relate with digital media in their daily lives. This is demonstrated by the manner in which adolescent girls engaged with mobile media SRHR content,

and with each other in a more open, friendly and accommodating environment compared to face to face engagements with adults.

The findings of this study are also significant in highlighting the potential of mobile media in providing adolescent girls with a platform through which they can access SRHR information at their convenience without the judgemental presence of their parents and guardians. Additionally, through mobile media platforms, Apps, and search engines, adolescent girls are able to engage with SRHR content in a manner that offers privacy, confidentiality, and reliability. Such benefits as are provided by mobile media technology can be leveraged upon to advance the wellbeing of adolescent girls as they transition into adulthood. While mobile media offers many benefits for adolescent girls' SRHR information needs, this study revealed some of negative aspects such as surveillance, and the fact that privacy is not absolutely assured. Additionally, the accuracy of the SRHR information sourced from mobile media is not guaranteed, and that mobile media can potentially expose adolescent girls to bullying and pornography. Given the enormous benefits of mobile media as highlighted in the findings of this study, it can be concluded that the benefits far outweigh the challenges. Therefore, it can be argued that mobile media technology is likely to continue being a "to-go-to" space for adolescent girls' SRHR information. However, for mobile media's potential to be fully utilised and for the full benefits to be achieved, the government and many other stakeholders have to consider investing in infrastructure development to improve the speed of the internet, reduce data costs, make mobile phones more affordable, improve the supply of electricity, and ultimately reduce the digital divide within and across provinces.

Like any study, this study had some limitations. The first limitation stems from the fact that this study is specific to the experiences of the secondary school girls in the 4 selected secondary schools in 4 districts of Lusaka Province, Zambia. It therefore did not cover any other province within Zambia and did not extend to any country beyond Zambia's borders. For this reason, it did not capture the experiences of adolescent girls outside Lusaka Province or outside Zambia, and therefore the findings of this study are specific to the study location and participants' experiences within their socio-economic and cultural context. Other contexts may yield different findings depending on the socio-economic and cultural variations.

The second limitation is that this was a qualitative study and does not therefore speak to other research designs such as quantitative and/or mixed methods. As a qualitative design, it utilised a

small sample size of 80 participants although as explained in the methodology section, 3 participants did not turn up for the FGDs. Such a small sample size is not representative of the whole population of Zambia, and therefore the findings of this study cannot be generalised to the whole population of Zambian adolescent girls. The findings of this study apply to the secondary school girls of Kabulonga Girls Secondary School (Lusaka District, Nakatete Secondary School (Kafue District), Chongwe Secondary School (Chongwe District), and Mount Makulu Secondary School (Chilanga District).

The third and final limitation, is based on the gender of the study population. This study restricted itself to the experiences of adolescent girls in their engagement with mobile media for SRHR information during Covid-19. The findings of this study cannot be transferable to boys since boys were not part of the study population. Notwithstanding the limitations, the findings of this study bear some significant contributions to knowledge and uncover areas that could be considered for future studies. While this study may not be generalised to the Zambian population, or indeed populations outside Zambia, its findings can be applicable to societies that bear similar cultural and socio-economic characteristics with the locations and study population of this study. Therefore, future studies could apply this study design and the theories it employed for investigations in other locations and make valuable contributions to the body of knowledge.

8.4 Future Research

This study revealed that many adolescent girls accessed SRHR information on mobile media using borrowed mobile phones. They borrowed mobile phones from their mothers, aunts, elder sisters, and occasionally elder brothers. Using borrowed phones elicited frustrations from adolescent girls as they could not access mobile media for SRHR information and other activities as and when they wanted. They also could not use the borrowed phones for as long as they wanted because the owners would grab them back at any time. Certainly, this limited their access to mobile media. Such limitations also prevented them from having quality interactions with their peers to engage on SRHR issues or to share their SRHR experiences among themselves. Given this reality, future studies could focus on the implications of not owning a mobile phone by adolescent girls on their SRHR information needs, particularly in the context of cultural limitations on open and free discussions on sexual health matters.

This study established that girls often find themselves conflicted as they access and evaluate SRHR information from mobile media and from their grandmothers and other adult women. Whereas mobile media provides uncensored SRHR information, the cultural space is more guarded and fuller of "don'ts", therefore often leaving adolescent girls at crossroads. This situation requires a delicate and skilful navigation of the two spaces by adolescent girls, who unfortunately at this stage of their development may not possess the requisite skills for them to evaluate what they access from these spaces and act appropriately. Some researchers could consider researching on developing theories to empower adolescent girls with mechanisms and steps to manage the mobile media (modern space) and the cultural space embodied by grandmother and other adult women. This is necessary because the two spaces are likely to always be present and often in tension in the lives of adolescent girls.

This study focused on mobile media and adolescent girls' access to SRHR information during the Covid-19 pandemic. Although it referred to SRHR products and services in literature review, this study's focus was on adolescent girls' access to SRHR information. For this reason, future studies could investigate the role of mobile media in linking adolescent girls to SRHR products and services, or exploring how mobile media could play a role in facilitating access and consumption of SRHR products and services by adolescent girls in the Zambian context.

This study did not address the socio-demographic characteristics of participants to comprehend how these can potentially affect adolescent girls' engagement with mobile media to access SRHR information during Covid-19. I believe this is an area worth exploring, and future studies could focus on it, and possibly do a comparative analysis of two different locations. This would likely produce interesting results.

This study's location was Lusaka Province, specifically 4 selected secondary schools in 4 districts. The study revealed an increase in the use of mobile media to access SRHR information during Covid-19. Mobile media was generally held as providing detailed, accurate and reliable SRHR information for adolescent girls, and was therefore deeply appreciated as a reliable source of SRHR information compared to sources such as mothers and grandmothers. Since this study was located in Lusaka Province, and its findings not generalizable to other provinces, future studies could be located in other provinces and districts within Zambia as these locations could potentially yield different or similar results to this study.

This study specifically explored the role of mobile media in adolescent girls' access to SRHR information during Covid-19. By implication, it did not explore mobile media and SRHR information needs of adolescent boys. Future studies could therefore investigate the role of mobile media in addressing boys' SRHR needs during Covid-19. Given the difference of genders, a focus on boys would likely yield different findings.

Lastly, this study employed a qualitative study design and therefore was based on a small and limited sample size. As pointed out, the findings of this study can therefore not be generalised to the whole Zambia. A quantitative or mixed methods study design, with a large sample size could be considered in future studies to produce generalizable findings applicable to the whole Zambia.

8.5 Recommendations

The study makes the following recommendations

1. **Enhance Digital Literacy**: Implement programs to improve adolescents' ability to critically assess online SRHR information.
2. **Address the Digital Divide**: Provide affordable internet access and devices to underserved communities to bridge the gap in digital resources.
3. **Curate Reliable SRHR Content**: Collaborate with health experts to develop accurate and culturally sensitive SRHR content for digital platforms.
4. **Integrate Hybrid Approaches**: Combine digital platforms with community-based SRHR education to maximize reach and effectiveness.

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APPENDICES

Appendix I: Informed Consent

TOPIC: **The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information During Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia**

Correspondence with participants: Letter of invitation to participate in the study.

Dear student,

I, Ringford Abel Mwelwa, are collecting data to complete my study on: **The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information During Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.** The study is being conducted under the supervision of the University of Kwazulu-Natal, Centre for Culture and Media Studies (CCMS). The name of my supervisor is Prof. Sarah Gibson. I am writing to request for your consent to participate in this study. The importance of this study is to examine the role of mobile media in young people's access to health information and services amid Covid-19 in Lusaka, Zambia.

The aims of this study are:

1. To investigate how adolescent girls have employed mobile media to access information on SRHR during Covid-19 pandemic.
2. To evaluate the affordances and limitations of mobile media for adolescent girls' access to SRHR information during the Covid-19 pandemic and.
3. To identify the main sources of SRHR information on mobile media during the Covid-19 pandemic.
4. To assess the role (if any) of adolescents' mobile media participatory activities in their access to SRHR information during the Covid-19 pandemic.
5. To assess how adolescent girls' experiences with mobile media can translate into a post-Covid-19 context for access to SRHR.

Participation in this study is purely voluntary, as such you as a participant are free to withdraw your participation at any point without any consequences. Participation will not be paid for. During Focus Group Discussions, light refreshments will be provided. As a Covid-19 precautionary measure, you will be provided with facemasks and hand-sanitizers. Generally, responses will be treated as confidential. I request to use a recorder during the focus group discussions. The data will be in the custody of the University of Kwazulu-Natal for five years for purposes of verification. Should you request for the final copy of thesis, an electronic copy will be given once completed.

Thank you for your time.

Your willingness to participate in this study will greatly be appreciated.

Appendix II Sheet and Consent to Participate in Research

Date: _____

Dear student

My name is Ringford Abel Mwelwa, a PhD student with the Centre for Communication, Media and Society under the School of Applied Human Sciences, University of KwaZulu-Natal. Below are the details of the researcher and the institution of research:

Researcher	Ringford Abel Mwelwa	+[redacted]	[redacted]m 221115956@stu.ukzn.ac.za
Department	Centre for Communication, Media and Society (CCMS)	+27-31-2602505	http://ccms.ukzn.ac.za
Institution	University of KwaZulu-Natal (UKZN)	Howard College Campus, Masizi Kunene Ave, Glenwood, Durban, South Africa	http://www.ukzn.ac.za
Supervisor	Prof. Sarah Gibson	+[redacted]	Gibsons@ukzn.ac.za
Chair, UKZN Human Sciences	HSSREC@ukzn.ac.za	+27-0312603587/4557/8350	HSSREC@ukzn.ac.za

Research Committee			
Committee Clerk, UKZN Human Sciences Research Committee	HSSREC@ukzn.ac.za	+27-0312603587/4557/8350	HSSREC@ukzn.ac.za

Signed Consent	
• I understand that the purpose of this Focus Group Discussion is solely academic. The findings will be published as research projects/dissertations and may be published in academic journals.	Yes No
• I understand I may choose to remain anonymous. (Please choose whether you would like to remain anonymous.)	Yes No
• I understand that I many choose whether my name will be quoted in remarks and or information attributed to myself in the final research documents.	Yes No
• I understand that I will not be paid for participating.	Yes No

• I understand that I reserve the right to discontinue and withdraw my participation any time.	Yes No
• I consent to be frank to give the information	Yes No
• I understand I will not be coerced into commenting on issues against my will, and that I may decline to answer specific questions.	Yes No
• I choose to use a pseudonym, not my real name.	Yes No
• I consent to the use of audio-recorder during focus group discussions	Yes No
By signing this form, I consent that I have duly read and understood its contents.	
_____ _____ _____ **Name of Participant**	

_____	_____	_____
Name of Researcher	**Signature**	**Date**

Appendix III: Informed Consent Form

TOPIC: **The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information During Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.**

Correspondence with participants: Letter of invitation to participate in the study.

Dear student,

I, Ringford Abel Mwelwa, are collecting data to complete my study on: **The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information During Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.** The study is being conducted under the supervision of the University of Kwazulu-Natal, Centre for Culture and Media Studies (CCMS). The name of my supervisor is Prof. Sarah Gibson. I am writing to request for your consent to participate in this study. The importance of this study is to examine the role of mobile media in adolescents' access to sexual reproductive health information amid Covid-19 in Lusaka province of Zambia.

The aims of this study are:

1. To investigate how adolescent girls have employed mobile media to access information on SRHR during Covid-19 pandemic?
2. To evaluate the affordances and limitations of mobile media for adolescents' access to SRHR information during the Covid-19 pandemic and.
3. To identify the main sources of SRHR information on mobile media during the Covid-19 pandemic.
4. To assess the role (if any) of adolescent girls' mobile media participatory activities in their access to SRHR information during the Covid-19 pandemic.
5. To assess how adolescents' experiences with mobile media can translate into a post-Covid-19 context for access to SRHR

Participation in this study is purely voluntary, as such you as a participant are free to withdraw your participation at any point without any consequences. Participation will not be paid for. During

Focus Group Discussions, light refreshments will be provided. As a Covid-19 precautionary measure, you will be provided with facemasks and hand-sanitizers. Generally, responses will be treated as confidential. I request to use a recorder during the focus group discussions. The data will be in the custody of the University of Kwazulu-Natal for five years for purposes of verification. Should you request for the final copy of thesis, an electronic copy will be given once completed.

Thank you for your time.

Your willingness to participate in this study will greatly be appreciated.

Appendix IV Informed parental consent for children under 18 years

TOPIC: **The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information During Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.**

Date: _____

Dear parent/guardian

I, Ringford Abel Mwelwa, are collecting data to complete my study on: **The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information During Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.** The study is being conducted under the supervision of the University of Kwazulu-Natal, Centre for Culture and Media Studies (CCMS). The name of my supervisor is Prof. Sarah Gibson. I am writing to request for your consent for your daughter to participate in this study. The importance of this study is to examine the role of mobile media in young people's access to sexual reproductive health information amid Covid-19 in Lusaka province of Zambia.

The aims of this study are:

1. To investigate how adolescent girls have employed mobile media to access information on SRHR during Covid-19 pandemic?
2. To evaluate the affordances and limitations of mobile media for adolescent girls' access to SRHR information during the Covid-19 pandemic and.
3. To identify the main sources of SRHR information on mobile media during the Covid-19 pandemic.
4. To assess the role (if any) of adolescent girls' mobile media participatory activities in their access to SRHR information during the Covid-19 pandemic.

5. To assess how adolescent girls' experiences with mobile media can translate into a post-Covid-19 context for access to SRHR

Your daughter is being asked to take part in a discussion with 9 other pupils. The discussion will be moderated by a female moderator. The focus group discussion will start with the moderator ensuring that all the participants are comfortable. She will then proceed to respond to questions that participants may have about the study. After this, the discussion will focus on where pupils have gone to search for sexual reproductive health information during the Covid-19 pandemic. These are the types of questions that participants will be asked, they will not be asked about their personal sexual health stories or to share anything they may not be comfortable with.

Location

The discussion will take place within the school premises in a room designated by the school authorities. No one else but the participants and the moderator will be present in the room, and in the discussion.

Duration

We are asking your daughter to take part in a discussion that will take about 1 hour. This will be done outside school learning hours.

Risks and Discomforts

We are asking your daughter to share her experiences in searching for sexual reproductive health information via mobile media in the context of Covid-19. If your daughter may be uncomfortable to talk about some of the issues, you must know that she is free not to respond, and she is free not to participate in the discussion altogether. She does not have to provide us with any reasons or explanations for her decision.

Benefits

There may not be immediate or direct benefits to your child from this research, but her participation is likely to help us find out more about the sexual reproductive health information access needs, and we hope that this will help policymakers to meet such needs better in future.

Confidentiality

We will not share information about your daughter with anyone apart from the researcher and the moderator. The information that will be collected from your daughter during the focus group discussion will be kept very confidential, and only the researcher and the focus group moderator will have access to it. Additionally, we will ask your child not to talk to anyone about what will be shared in the discussion, as this information is confidential. However, you should know that we will have no control on what your child decides to share with others outside the discussion.

Right to Withdraw

If you choose not to have your daughter participate in this study, and if your daughter wishes not to participate, your child will not be affected in any way by this decision. Your daughter's school status will remain unaltered. Your daughter may choose to withdraw from the study before or during the discussions, or you may choose to withdraw her at any time without any consequences on her or on you.

Sharing of Research Findings

At the end of the research, we shall share the findings through the thesis that we are writing and shall also share with the participants. It must be noted that nothing your daughter will share will be attributed to her by name.

Persons to Contact

If you have any questions or clarifications to be made concerning this study, you can contact either me or my supervisor, or indeed any of the persons/offices provided in the information sheet below.

Researcher	Ringford Abel Mwelwa	[redacted]	[redacted]m 221115956@stu.ukzn.ac.za
Department	Centre for Communication,	+27-31-2602505	http://ccms.ukzn.ac.za

	Media and Society (CCMS)		
Institution	University of KwaZulu-Natal (UKZN)	Howard College Campus, Masizi Kunene Ave, Glenwood, Durban, South Africa	http://www.ukzn.ac.za
Supervisor	Prof. Sarah Gibson	+[redacted]	Gibsons@ukzn.ac.za
Chair, UKZN Human Sciences Research Committee	HSSREC@ukzn.ac.za	+0312603587/4557/8350	HSSREC@ukzn.ac.za
Committee Clerk, UKZN Human Sciences Research Committee	HSSREC@ukzn.ac.za	+0312603587/4557/8350	HSSREC@ukzn.ac.za

Certificate of Consent

I have been asked to give consent for my daughter to participate in the study which requires her to be part of a focus group discussion. I have read the foregoing information (or it has been read to me). I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily for my daughter to participate in this study.

Name of parent or guardian_____

Signature of parent or guardian _____

Appendix V Younger Child Assent

TOPIC: **The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information During Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.**

Name of Principal Investigator: Ringford Abel Mwelwa

Name of Supervisor: Professor Sarah Gibson

Date: _____

Dear student

I want to tell you about the research study I am doing. You may wish to know that research is a way of learning more about a situation. In my study, I want us to learn more about "**The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information During Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.**"

The aims of this study are as follows:

1. To investigate how adolescents have employed mobile media to access information on SRHR during Covid-19 pandemic?
2. To evaluate the affordances and limitations of mobile media for adolescent girls' access to SRHR information during the Covid-19 pandemic and.
3. To identify the main sources of SRHR information on mobile media during the Covid-19 pandemic.
4. To assess the role (if any) of adolescent girls' mobile media participatory activities in their access to SRHR information during the Covid-19 pandemic.
5. To assess how adolescent girls' experiences with mobile media can translate into a post-Covid-19 context for access to SRHR.

You are being asked to participate in this study because you have access to a cell phone, access to internet, you were affected by the long school closure due to Covid-19, you have basic knowledge about Covid-19, and you are a secondary school student, and you are a girl.

If you agree to participate in this study, you will be required to take part in a focus group discussion of 10 students, and these will be selected from grade 8 and 9 (one group), and grade 10 to 12 (another group).

During the focus group discussion, you will be free to answer questions according to your understanding. If you are not happy or are uncomfortable with the question, you will be free not to answer it. In addition, if during the focus group discussion, you feel like stopping to participate, you will be free to do so.

Possible Benefits of the Study

I do not know if this study will help individually, but I expect that it will help you to learn more about the topic through the focus group discussion. I also expect that the study will help other adolescents to learn more and appreciate the importance of accessing sexual reproductive health information to avoid pregnancy, sexually transmitted infections including HIV/AIDS.

Autonomy

You do not have to join this study. The decision is yours. You can say yes today, but you can change your mind later. If you can change your mind, all you need to do is tell us that you want to stop. No one will be angry at you if you do not want to take part in this study. In the same manner, no one will be angry at you if join the study and later change your mind and choose to withdraw from it.

Before you say yes or no to joining this study, you are free to ask questions you may have, and we will answer them in the best way we can. If you join the study, again you will be free to ask questions at any time, and we will answer them. All you need to do is tell the moderator that you have a question or questions, and you will be given a chance to ask the questions.

If you have any questions about this study, please feel free to contact the following:

Researcher	Ringford Abel Mwelwa	[redacted]	[redacted] m 221115956@stu.ukzn.ac.za

Department	Centre for Communication, Media and Society (CCMS)	+27-31-2602505	http://ccms.ukzn.ac.za
Institution	University of KwaZulu-Natal (UKZN)	Howard College Campus, Masizi Kunene Ave, Glenwood, Durban, South Africa	http://www.ukzn.ac.za
Supervisor	Prof. Sarah Gibson	+[redacted]	Gibsons@ukzn.ac.za
Chair, UKZN Human Sciences Research Committee	HSSREC@ukzn.ac.za	+0312603587/4557/8350	HSSREC@ukzn.ac.za
Committee Clerk, UKZN Human Sciences Research Committee	HSSREC@ukzn.ac.za	+0312603587/4557/8350	HSSREC@ukzn.ac.za

Child's Name Signature Date

Person Obtaining Assent Signature Date

Appendix VI UKZN Ethical Clearance

29 August 2022

Ringford Abel Mwelwa (221115956)

School of Applied Human Sciences

Howard College

Dear RA Mwelwa,

Protocol reference number: HSSREC/00004311/2022

Project title: The role of mobile media in adolescents' access to sexual reproductive health information during coronavirus pandemic: A case study of 4 selected secondary schools in Lusaka, Zambia. Degree: PhD

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 23 May 2022 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 29 August 2023.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,

Professor Dipane Hlalele (Chair)

/dd

Appendix VII Focus Group Discussion Guide

Focus group interview schedule for research on the study on "**The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information During Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia."**

Name of Moderator
Name of Assistant
Date
Attendees

Introduction

Hello and thank you very much for your availability.
My name is _____. I the research assistant to Ringford Abel Mwelwa, a Communications, Media, and Culture PhD candidate at the University of Kwazulu Natal, South Africa. I will be the moderator for our discussion.
This is Ms._____, a colleague and second research assistant. She will record the proceedings, take notes together with me so that a true reflection of this discussion is captured.

I encourage you all to be open and participate freely in this important discussion.

Purpose of the FGD

We are gathered to discuss the topic **The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information During Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.** The purpose of this is to understand what role mobile media plays or has played aiding adolescents to access SRHR information during Covid-19 in Lusaka, Zambia. Your perceptions drawn from your experiences are the backbone of this discussion, and my role is strictly to moderator the discussion. No contribution will be deemed wrong, right, desirable, or undesirable, therefore, all contributions are welcome. You are free to disagree based on your individual experiences. Additionally, you are free to change your mind on a point you may have made earlier in the discussion. I encourage to be open and freely share what you feel and/or think about the topic of discussion.

Procedure

I_____ will be taking notes and audio-recording the deliberations. This will enable me to totally concentrate on listening to your contributions and focus on moderating the discussion. Whatever you share here is strictly confidential. Since this is a group discussion, feel free to contribute. It would be really gratifying if you give chance to each other as you share so that the discussion flows orderly. The discussion is scheduled to last for one hour.

Creating Rapport and Participant Introduction

As a way of getting into our discussion, may we introduce ourselves by sharing names, age, which grade one is in. In addition, share with us how Covid-19 has generally affected your life?

1. How did Covid-19 (if at all) affect your access to SRHR information? With the lockdowns, and prolonged school closures, and restrictions, how did you employ/use mobile media to access information on SRHR during Covid-19 pandemic?
2. If you used mobile media to search for health information on SRHR before Covid-19, how has Covid-19 changed the frequency of your using of such digital innovations in your search for SRHR information (did you use mobile media more or less, and why?)
3. Which applications did you use and how often? Why did you use these applications?
4. What has been your experience of social networking sites for accessing SRHR (Was your experience good or bad, and why?)
5. What challenges do you face while seeking SRHR information via mobile media?
6. What kind of emotional support (if any) did you experience in your mobile media interactions on SRHR issues?
7. Going forward in non-Covid-19 times how do you intend to access SRHR information?
8. In your use of mobile media during the Covid-19 pandemic, how did the sites you visited help you to participate in the sharing of knowledge on SRHR with peers and the site itself? Or how did the sites, apps facilitate your contributing to the debate on SRHR? (were the sites providing an avenue/way for feedback, for example requesting you to write back to them, and how you make use of them).
9. In your use of mobile media in accessing SRHR, do you feel you were co-producers or simply consumers of the information offered on the mobile media sites or mobile media apps you visited? Why or how do you feel like that?
10. What type of information on SRHR did you access, and how did this information take into account locally generated sources of knowledge? (for example, did this information speak to your cultural context: ifisungu, ifimbusa)?
11. What do you feel/think are some of the benefits of using mobile media for accessing SRHR information compared to other sources of SRHR information?
12. What role do you think mobile media serves for adolescents in becoming more informed about SRHR? (Do you think adolescents become more informed about SRHR by using mobile media to access information? Why and how do you think this is so?
13. What do you think are the advantages or disadvantages of using mobile media for accessing SRHR information?
14. Do you think/feel adolescents should be encouraged to use social media to access and share SRHR information? If yes, why? If not, why?
15. Is there any issue related to our topic that you feel or think has not been tackled? Feel free to add what you feel/think has not been handled.

Thank you very much for your wonderful participation in this FDG. Your time and contributions are valued and highly appreciated.

Objectives of the Study:

6. To investigate how adolescent girls have employed mobile media to access information on SRHR during Covid-19 pandemic.
7. To evaluate the affordances and limitations of mobile media for adolescent girls' access to SRHR information during the Covid-19 pandemic and.
8. To identify the main sources of SRHR information on mobile media during the Covid-19 pandemic.
9. To assess the role (if any) of adolescent girls' mobile media participatory activities in their access to SRHR information during the Covid-19 pandemic.
10. To assess how adolescent girls' experiences with mobile media can translate into a post-Covid-19 context for access to SRHR.

Research Questions:

1. How have adolescent girls in Lusaka, Zambia, employed mobile media to access information on SRHR during Covid-19 pandemic?
2. What are the affordances and limitations of mobile media for adolescent girls accessing SRHR information during the Covid-19 pandemic?
3. What are the main sources of SRH information for adolescents on mobile media during the Covid-19 pandemic?
4. How have the mobile media participatory activities of adolescents aided their access to and sharing of health information on SRHR during Covid-19?
5. How can the experiences of adolescent girls with mobile media translate into a post-Covid-19 context for access to SRHR?

Appendix X GATEKEEPERS LETTERS

All correspondence should be Addressed to
The District Education Board Secretary
Cell: [redacted]

In reply please quote

No.....

REPUBLIC OF ZAMBIA

MINISTRY OF EDUCATION

DISTRICT EDUCATION BOARD SECRETARY
P.O. BOX 350019
CHILANGA

26th April, 2022

Ringford Abel Mwelwa
Centre for Communication, Media and Society (CCMS)
School of Applied Human Science
College of Humanities
Howard College Campus
University of Kwazulu-Natal

Dear Ringford Abel Mwelwa (Student) and Prof. Sarah Gibson (Supervisor)

RE: Permission to Conduct Research

Gatekeeper's permission is hereby granted for you to conduct research on the Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information during Covid-19 at Mt. Makulu Secondary School in Chilanga District, provided ethical clearance has been obtained.

We note the working ~~little~~ title of your dissertation is: "The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information during Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.

We also note that 2 focus group discussions will be conducted with learners from grade 8 to 12. You are to ensure that data is collected with due confidentiality as stipulated in the informed consent form to be provided to the participants and their parents/guardians.

Yours sincerely,

[redacted]

Fr. Benjamin Chisulo,
DISTRICT EDUCATION BOARD SECRETARY,
CHILANGA DISTRICT

REPUBLIC OF ZAMBIA
MINISTRY OF GENERAL EDUCATION
25 APR 2022
DISTRICT EDUCATION BOARD SECRETARY
P. O. BOX 350019, CHILANGA.

c.c file

All Communications should be addressed to the DEBS

Telephone / Fax: 311386
E-mail: address: [redacted]

In Reply please quote

No.....

REPUBLIC OF ZAMBIA

MINISTRY OF EDUCATION

26th April, 2022

DISTRICT EDUCATION BOARD OFFICE
P.O. Box 360296
KAFUE

Ringford Abel Mwelwa
Centre for Communication, Media and Society (CCMS)
School of Applied Human Science,
College of Humanities,
Howard College Campus,
University of Kwazulu-Natal.

Dear Ringford Abel Mwelwa (Student) and Prof. Sarah Gibson (Supervisor)

RE: Permission to Conduct Research

Gatekeeper's permission is hereby granted for you to conduct research on the Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information During Covid-19 at Nakatete Secondary School in Kafue District, provided ethical clearance has been obtained.

We note the working ~~iitle~~ title of your dissertation is: "The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information during Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.

We also note that 2 focus group discussions will be conducted with learners from grade 8 to 12. You are to ensure that data is collected with due confidentiality as stipulated in the informed consent form to be provided to the participants and their parents/guardians.

[redacted]

Mr. Franklin Musakula
District Education Board Secretary
Kafue District

All correspondences should be addressed
to the District Education Board Secretary

Telephone: 0211-240250/240249/0955 623749
[redacted]

In reply please quote

No.....

REPUBLIC OF ZAMBIA
MINISTRY OF EDUCATION

27 April, 2022

DISTRICT EDUCATION BOARD SECRETARY
P.O.Box 50297
LUSAKA

Ringford Abel Mwelwa
Centre for Communication, Media and Society (CCMS)
School of Applied Human Science
College of Humanities
Howard College Campus
University of Kwazulu-Natal

DEAR MR. RINGFORD ABEL MWELWA (STUDENT) AND PROF. SARAH GIBSON (SUPERVISOR)

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research on the Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information during Covid-19, at Kabulonga Girls Secondary School in Lusaka District. This permission is granted on the condition that ethical clearance is obtained from the University of KwaZulu Natal.

We note that the working title of your dissertation is: "The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information during Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.

Additionally, we note that 2 focus group discussions will be conducted with learners from grade 8 to 12. A group of 10 participants will be selected from grades 8 and 9 (junior section), with another group of 10 participants drawn from grades 10-12 (senior section).

You are to ensure that data is collected with due confidentiality as stipulated in the informed consent form to be provided to the participants and their parents/guardians.

Yours sincerely,

[redacted]

DISTRICT EDUCATION BOARD SECRETARY
LUSAKA DISTRICT

REPUBLIC OF ZAMBIA
MINISTRY OF EDUCATION
27 APR 2022
DISTRICT EDUCATION
BOARD SECRETARY
P.O. BOX BOX 50297, LUSAKA

All communications should be addressed

To the District Education Board Secretary
Telephone [redacted]

Fax: +260 211 620 111

27th April, 2022

REPUBLIC OF ZAMBIA

MINISTRY OF EDUCATION

Dear Ringford Abel Mwelwa (Student) and Prof. Sarah Gibson (Supervisor)

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research on the Role of Mobile Media in Adolescents Access to Sexual Reproductive Health Information during Covid-19, at Chongwe Secondary School in Chongwe District. This permission is granted on the condition that ethical clearance is obtained from the University of KwaZulu Natal.

We note that the working title of your dissertation is: "The Role of Mobile Media in Adolescents' Access to Sexual Reproductive Health Information during Covid-19 Pandemic: A Case Study of 4 selected secondary schools in Lusaka, Zambia.

Additionally, we note that 2 focus group discussions will be conducted with learners from grade 8 to 12. A group of 10 participants will be selected from grades 8 and 9 (junior section), with another group of 10 participants drawn from grades 10-12 (senior section).

You are to ensure that data is collected with due confidentiality as stipulated in the informed consent form to be provided to the participants and their parents/guardians.

Yours sincerely.

Joseph C. Chanda

REPUBLIC OF ZAMBIA MINISTRY OF EDUCATION

DISTRICT EDUCATION **BOARD SECRETARY** CHONGWE DISTRICT.

27 APR 2022

DISTRICT EDUCATION BOARD SECRETARY

P.O, BOX **33**, CHONGWE

Ms. Efa Shumba

Kafue General Hospital

P.O Box 360025

Phone Number: +[redacted]

Email Address: [redacted]

23/08/2022.

Ringford Abel Mwelwa

Centre for Communication, Media and Society (CCMS)

School of Applied Human Science

College of Humanities

Howard College Campus

University of Kwazulu-Natal

Dear Ringford A. Mwelwa (Student), and Prof. Sarah Gibson (Supervisor)

Ref: Availability for Psychosocial Counselling Services

I received your letter in which you requested for my availability to provide free counselling services to pupils of Nakatete Secondary School for your study that seeks to explore the role of mobile media in adolescents' access to sexual reproductive health information during Covid-19.

I wish to communicate through this letter, that I will avail my psychosocial counselling services without any financial charges for the purposes of your study during data collection via Focus Group Discussions (FGDs) at Nakatete Secondary School in Kafue District.

Yours Sincerely,

[redacted]

Efa Shumba

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH
KAFUE GENERAL HOSPITAL
23 AUG 2022
REGISTRY DEPARTMENT
P.O. BOX 360025, KAFUE
LUSAKA PROVINCE

Hellen Bupe Kunda

Chilenje General Hospital

P.O Box 50627

Phone Number: [redacted]

Email Address: [redacted]

24th June, 2022

Ringford Abel Mwelwa

Centre for Communication, Media and Society (CCMS)

School of Applied Human Science

College of Humanities

Howard College Campus

University of Kwazulu-Natal

Dear Ringford A. Mwelwa (Student), and Prof. Sarah Gibson (Supervisor)

Ref: Acceptance to Offer Psychosocial Counselling

I, Hellen Bupe Kunda, a psychosocial counsellor at Chilenje General Hospital do hereby accept to offer free counselling services to pupils of Kabulonga Girls Secondary School who will participate in your study. I note that the title of your study is: "The Role of Mobile Media in Adolescents' access to Sexual Reproductive Health Information During the Covid-19 Pandemic: A Case study of 4 Selected Secondary Schools in Lusaka, Zambia."

I will be available to offer counselling to pupils (participants) as need may arise during their involvement in focus group discussions.

[redacted]

Hellen Bupe Kunda

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH
28 JUN 2022
CHILENJE LEVEL ONE HOSPITAL
OUT PATIENT DEPARTMENT (OPD)
PO BOX 50827, LUSAKA, ZAMBIA.

Felistus Shamilimo,

Chongwe District Hospital,

P.O Box, 25.

Chongwe.

Cell Phone Number: [redacted]

Email Address: [redacted]

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH
23 AUG 2022
MEDICAL SUPERITENDENT
CHONGWE DISTRICT HOSPITAL

23rd August 2022.

Ringford Abel Mwelwa

Centre for Communication, Media and Society (CCMS)

School of Applied Human Science

College of Humanities

Howard College Campus

University of Kwazulu-Natal

Dear Ringford A. Mwelwa (Student), and Prof. Sarah Gibson (Supervisor)

Ref: **Psychosocial Counselling**

In response to your request for my services as a psychosocial counsellor to be offered to pupils at Chongwe Secondary School during data collection for your study, I do hereby pledge my commitment and availability to execute the said task.

I wish you well in the entirety of your studies.

Yours Sincerely,

[redacted]milimo