

# IMPACTS OF SOCIAL MEDIA ON ADOLESCENTS' MENTAL HEALTH

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Sosiaalisen median vaikutus nuorten mielenterveyteen on saanut huomiota viimeisen vuosikymmenen aikana. Teknologian ja sosiaalisen median käytön lisääntyessä on tärkeää ymmärtää niiden vaikutus nuoriin. Tässä tutkimuksessa käytettiin systeemaattista kirjallisuuskatsausta tavoitteena syventää ymmärrystä sosiaalisen median vaikutuksista nuorten mielenterveyteen.

Tässä opinnäytetyössä tarkastellaan, miten sosiaalinen media vaikuttaa 10-17-vuotiaiden nuorten mielenterveyteen. Julkaistut tutkimukset haettiin ja kerättiin CINAHL, Google Scholar-, Science direct/Elsevier, PubMed- ja Web of Science -tietokannoista käyttäen asiaankuuluvia avainsanoja ja lauseita. Sisällys- ja poissulkemiskriteereitä käytettiin tutkimukseen osuvimpien vertaisarvioitujen artikkelien rajaamiseen ja valitsemiseen.

Katsaus osoitti, että sosiaalisen median käytön ja nuorten mielenterveyden välillä on yhteyksiä. Laadulliset havainnot osoittivat, että sosiaalinen yhteys ja kommunikaatio, positiivinen sisältö ja tietoisuus, sosiaalinen ja perheen tuki, resurssit stressin selviytymiseen, yhteiset kiinnostuksen kohteet ja tyytyväisyys elämään ovat sosiaalisen median myönteisiä vaikutuksia, kun taas negatiivisia vaikutuksia ovat masennustila ja ahdistus, stressi ja tyytyväisyys elämään. Muita negatiivisia vaikutuksia olivat unen puute, provosoiva sisältö ja väärä tieto, verkkokiusaaminen, vihamielisyys ja rasismi, päihteiden käyttö ja itsensä vahingoittaminen sekä seksuaalinen häirintä.

Avainsanat nuoret, sosiaalinen media, mielenterveys, internet

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The impact of social media on adolescents' mental health has been gaining attention in the last decade. With the growth of technology and the use of social media, it's crucial to understand their impact on young people. This study utilizes literature review to deepen the understanding of the impact of social media on mental health among adolescents.

This thesis examines how social media affects the mental health of adolescents aged 10-17 years. Studies were searched and collected from CINAHL, google scholar, science direct / Elsevier, PubMed, and web of science databases, using relevant keywords and phrases. Inclusion and exclusion criteria were used to narrow and select the most relevant peer-reviewed articles for the study.

The review showed there are relationships between the use of social media and mental health of adolescents. The qualitative findings showed that social connection and communication, positive content and awareness, social and family support, resources for coping with stress, shared interests, and life satisfaction are positive impacts of social media, while negative impacts include depressive mood and anxiety, stress and lack of adequate sleep, triggering content and misinformation, cyberbullying, hostility and racism, substance use and self-harm, and sexual harassment.

Key words                      adolescents, mental health, social media, internet

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## FOREWORD

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To our patients, both past and present. Your stories and strength increase our passion for nursing and remind us of the impact we can make in your lives.

And to one another, collaborating on this thesis has taught us the true value of teamwork and shared purpose in our journey as nurses. Together, we've created something special.

## SYMBOLS AND ABBREVIATIONS

SMU	Social Media Use
CMSU	Compulsive Social Media Use
FOMO	Fear of Missing Out
WHO	World Health Organisation
ACOG	American College of Obstetricians and Gynaecologists
ADHD	Attention-Deficit/Hyperactivity Disorder
HVSM	Highly Visual Social Media

## 1 INTRODUCTION

Amidst the ever-growing digital landscape, today's youth are deeply immersed in social media, an experience uniquely shaped by new technologies in streaming and multimedia. In Finland, research by Hylkilä et al. (2023, 320-328) revealed that on average, adolescents (aged 10-17) spend between 35–42 hours per week online, with half of this time spent on social media. This excessive usage is a growing concern, prompting efforts to understand its impact and potential benefits. As of 2023, research has shown that there are approximately 4.9 billion users of social media globally, accounting for over 60% of the world's population in which the most popular platforms include Facebook, Instagram, TikTok, Twitter (now X), and Snapchat. For instance, Facebook boasts of over 2.9 billion active users on monthly basis, while Instagram has over 1.5 billion. (Statista, 2023.) In the United States, a recent survey found that 90% of teens who are within 13-17 years of age use social media, with 75% having active profiles and over half visiting social media sites daily (Pew Research Center, 2022).

While social media offers numerous benefits, adolescents are also exposed to various risks, including cyberbullying, pornography, and sleep disturbances. Research suggests a potential connection between excessive social media use and negative effects on adolescents' mental health. Some studies emphasize the problematic nature of prolonged social media use (Andreassen et al. 2017, 177; Marttila et al. 2021, 131-141; Piteo & Ward, 2020, 306), while others suggest more limited effects (Odgers & Jensen, 2020, 327; Orben & Przybylski, 2019, 676-682).

The impact of social media usage on adolescents' mental health is a critical research area, as increasing evidence suggests a relationship between social media engagement and mental health issues (Odgers & Jensen, 2020, 327). Nevertheless, the impacts are considered small and induced by various moderating factors such as age, gender, and the type of social media platform used (Gabrielle et al. 2024, 551-564).

Hence, the need for methods and preventive measures to ensure the use of social media has minimal impacts on adolescents' mental health, has motivated

the choice of the topic. Here, the authors of this study aim to qualitatively evaluate and compare several literatures on this topic. In collection of these scientific articles, the following keywords: social media, mental health, adolescents, negative effects, and positive effects using scientific database such as ScienceDirect, Scopus, Elsevier were used. The gathered scientific articles were limited to articles published in 2014-2024, and adolescents age category between 10-17. Although different age brackets have been used for adolescents in the literatures, in the context of this thesis, adolescents will be categorized as young people within the age bracket 10-17 years.

## 2 PURPOSE, AIM AND RESEARCH QUESTIONS

The purpose of this thesis is to describe the impact of social media on the mental health of adolescents using existing literature. The thesis aims to enhance the understanding of the complex relationship between the use of social media and adolescent mental health. Highlighting the negative and positive impacts of social media on the adolescent's mental health. This thesis further seeks to provide insights, tools, and strategies for healthcare professionals, educators, policymakers, guardians, and parents; by analysing the available scientific evidence.

The research questions of this thesis are described below:

1. What are the positive impacts of social media use on adolescents' mental health?
2. What are the negative impacts of social media use on adolescents' mental health?

### 3 OVERVIEW OF ADOLESCENTS, MENTAL HEALTH AND SOCIAL MEDIA

#### 3.1 Adolescents

Adolescence is a crucial stage of development that begins with puberty. These years are developmental stages towards adulthood and can be categorized into three stages: early adolescence (10-13), middle adolescence (14-17), and late adolescence (17-21) (Salmela-Aro, 2011, 360-368; Colarusso, 1992, 91-105). However, the progression from one stage to another in terms of their developmental stages varies from one adolescent to another. These stages are characterized by significant biological, cognitive, emotional, and psychosocial changes (Backes & Bonnie, 2019, 37-75.) During this period, the transition of adolescents from childhood to adulthood is marked by transformations in personal relationships, increasing independence, and evolving social roles. During these stages of physical and mental changes, adolescents' experience periods of struggling with body image, sense of identity, and increased focus on themselves, fluctuating between high expectations and poor self-esteem, and interests in clothing style influenced by their peer group. (AACAP 2017.) All these traits can be easily influenced by engagements on social media (Cao et al. 2021, 835-846).

Adolescents actively engage in their development but require supportive environments to thrive. While early life experiences influence their trajectory, the adaptive nature of adolescence offers a critical opening for growth and resilience (National Academies of Sciences, 2019; World Health Organization, 2020). There are three developmental stages that are associated with adolescents: such as physical, cognitive, emotional and psychosocial developments (Salmela-Aro, 2011, 360-368).

During physical development stage, adolescents grow rapidly and experience physical changes due to hormonal shifts that lead to puberty. These changes affect their height, weight, and the development of secondary sexual traits (Steinberg, 2014, 4-37). In cognitive development stage, this stage allows adolescents to think more abstractly, enhancing their reasoning and decision-making skills (Blakemore & Choudhury, 2006, 296-312). They also become better

at reflecting on their thoughts and learning. During emotional and psychosocial development stage, adolescence experience significant emotional growth as they develop self-awareness and work on their identities. This process involves navigating crucial relationships with peers and romantic partners. These relationships play a central role in adolescents' identity formation and are linked to their overall well-being. (Page et al. 2023, 123-145.)

Importantly, while adolescents show great ability to adapt and change, they are not just passive. They actively shape their own experiences through exploration and experimentation but need support from adults and a nurturing environment to succeed. Negative environments and platforms can make healthy development difficult (National Academies of Sciences, 2019). Moreover, early life experiences influence adolescent development, but this stage also provides chances for growth and recovery. Each stage builds on the previous one, showing how interconnected adolescents' development to adulthood is (World Health Organization, 2020).

While adolescent development involves a mix of physical, cognitive, emotional, and social changes. Recognizing these aspects is essential to effectively support adolescents during their developmental stages. By understanding the challenges and opportunities in adolescence, adults or professionals can create environments that help young people grow and develop positively. (Backes & Bonnie, 2019, 37-75.)

### 3.2 Mental Health of Adolescents

Mental health is a state of well-being where individuals feel empowered, resilient, and capable of handling life's challenges effectively. It influences how productive an individual can be in their work and ability to positively contribute to their communities. (Karim et al. 2020, 1-9.) The World Health Organization also defines mental health as a state of well-being whereby individuals recognize their abilities, cope with the normal stresses of life, work fruitfully and productively, and contribute to their communities. Adolescence is a formative period for developing healthy emotional and social habits, which are essentials for maintaining mental

well-being. This involves getting adequate sleep, engaging in regular physical activity, building interpersonal, coping, and problem-solving skills, and learning to regulate emotions. (Sawyer et al. 2018, 1813-1820; World Health Organization, 2020.) Hence, having a strong support system in the family, school, and community are imperative during every stage of adolescence (World Health Organization, 2014).

### 3.2.1 Mental Health Factors in Adolescents

Several factors have been reported to affect mental health of adolescents (Lin & Guo, 2024, 1-29; Han et al. 2023, 41-46). These factors include exposure to hardship (location), peer pressure, low self-esteem, gender, educational performances, and identity exploration (Han et al. 2023, 41-46; World Health Organization, 2024; Lin & Guo, 2024, 1-29). Risks to mental health are further heightened by violence (particularly bullying and sexual violence), and harsh parenting. Therefore, adolescents exposed to more risk factors are at increased risk of developing mental health problems. (World Health Organization, 2024.) In addition, living conditions, non-access to necessary support, discrimination based on race, gender and physical appearance can potentially affect the mental health of some adolescents (Assari et al. 2017, 1-10; Prince et al. 2024, 1-16; Lavner et al. 2022, 7-14).

### 3.2.2 Common Mental Health Problems and Associated Conditions Among Adolescents

Mental health problems can affect adolescents' quality of life, and the earlier the symptoms are recognised the quicker it can be addressed. For example, epidemiological studies have hinted that between 8% to 10% of adolescents will experience severe depression (Michaud & Fombonne, 2005, 835-838). Some of these symptoms have potential of causing self-harming in adolescents, hence it is imperative to address them (Uh et al 2021, 1491-1500).

### 3.2.2.1 Depression and Anxiety in Adolescents

Depression and anxiety are the most prevalent mental health disorders among adolescents. One in eight adolescents currently experiences symptoms of an anxiety disorder (Rockhill et al. 2010, 66-99; Balamurugan et al. 2024, 1-18; Frison & Eggermont 2017, 603-609; Politte-Corn et al. 2024, 45.) Anxiety disorders (especially with adolescents) become clinically significant when they disrupt important aspects of life, like school, work, or social relationships. They often coexist with depression or ADHD and can increase the risk of suicide. (ACOG, 2017, 1-10.) In relationship with depression, mood disorder is a known symptoms of mental health disorder. It's been stated that 1 in 20 adolescents meets clinical criteria for a mood disorder (Tang & Pinsky, 2015, 52-60.) Mood disorders include bipolar disorder, major depressive disorder, premenstrual dysphoric disorder, and adjustment disorder with depressed mood. Depression is more prevalent among female adolescents than male adolescents and can lead to lower motivation to adhere to norms such as taking medication, protective sex and keeping up with scheduled appointments (ACOG, 2017, 1-10).

### 3.2.2.2 Eating Disorders

Eating disorders during adolescence may be correlated with an increased risk of a wide range of physical and mental health problems (Johnson et al. 2002, 545-552). This have been noted as a major health concern among adolescent girls, occurring at a much higher rate than in boys. The prevalence is difficult to pinpoint due to undiagnosed cases, but it's estimated that approximately 0.5% of female adolescents have anorexia nervosa, 1% have bulimia nervosa, and 3% to 5% have milder symptoms. (Viner & Booy, 2005, 411-414, Whitaker, 1992, 752-759.) Adolescents who are not satisfied with their appearance may be more likely to develop eating disorders because of several factors, with mental health stress being one of the most significant factors (Peleg et al. 2023, 1-11). According to Frieiro et al. (2021), adolescents' engagements on social media platforms can contribute to the development of disordered eating thoughts and lack of body satisfaction, associated with low self-esteem. Similar observations on the

connection of eating disorders and social media usage have been described in a different study by Nawaz et al.2024.

### 3.2.2.3 Substance Abuse

Another mental health problem among adolescents is abuse of substances (i.e. drugs, alcohol), which is a worldwide prevalent. The use of these substances among adolescents is of particular concern due to erratic behaviour that comes with being under the influence of these substances. Concerns includes hospitalization, injuries, poor educational attainment, premature mortality etc, attributed to using them. (Daniels et al. 2021, 9-21.) Celebrities on social media (or social media influencers) post pictures of themselves drinking alcohol or smoking hard drugs, this exposure is easily replicated by adolescents due to their fragile or vulnerable mental state. Studies has also shown that there is a definite link between social media use and the drive of adolescents towards substance use. (Westgate & Holliday 2016, 27–30; Uhls et al. 2017, S68- S69; Hilliard, 2019.) A study by Moreno & Whitehill (2014) found a relationship between frequent use of popular social media platforms and increased likelihood of substance abuse among adolescents, including alcohol, drugs, and tobacco.

### 3.2.2.4 Attention Deficit Hyperactivity Disorder

Attention deficit hyperactivity disorder (ADHD) is one of the most prevalent disorders of adolescence and affects their behaviour. The symptoms can start from adolescence and continue to adulthood. Individuals with ADHD often exhibit restlessness, difficulty concentrating, and impulsive behaviour. (Karteczka-Świętek et al. 2022, 1-13.) While the exact causes of ADHD remain unclear, research suggests that genetics play a significant role. Like many other disorders, ADHD is likely controlled by a combination of factors. In addition to genetics, researchers are investigating differences in brain development and neurobiology among individuals with ADHD. They are also exploring environmental factors that may increase the risk of developing ADHD, such as brain injuries, nutrition, and social environments. (NIMH, 2024.) Boys are six times more likely to go through ADHD than girls (Michaud & Fombonne, 2005, 835-838).

Adolescents with ADHD often have difficulty handling both negative and positive emotions, compared to their peers without it. The potential for them to exhibit stronger reactions to stress of frustration, rapid mood swings, and emotional impulsivity is stronger (Bunford, 2020, 77-100; Breaux et al. 2020., 500-507). Poor emotional regulation can however increase the possibility of engaging in risky behaviours, such as aggression, substance use, accidents, and conflicts (Bunford, 2020, 77-100).

#### 3.2.2.5 Nonsuicidal Self-Injury

Non-suicidal self-injury (NSSI) is a prevalent mental health issue among adolescents, affecting both community and clinical populations with lifetime rates ranging from 17 to 60% in adolescents (Brown & Plener, 2017, 3-8). ACOG defined NSSI as “intentional self-inflicted damage to the surface of one’s body, with the expectation that the injury will result in only minor or moderate physical harm” (ACOG, 2017, 1-10). In addition, they adjudged higher NSSI rates to females than males and should be considered in patients who frequently have accidents, provide unclear explanations for injuries, or present with unexplained wounds or scars during examination.

In another study, between 25% and 67% of individuals aged 13 to 24 who died by suicide had a history of NSSI (Nock, 2009, 78-83). While some studies have stated that self-harm is often embark on as a means of avoiding suicide (Caicedo & Whitlock, 2009, 1-2).

#### 3.2.2.6 Suicidal Thoughts

Suicide is a major public health problem globally, particularly among adolescents, where it is the second leading cause of mortality (ACOG, 2017, 1-10; Hua et al. 2024, 1-17). Many adolescents who have suicidal thoughts, or attempt suicide have underlying mental health conditions, with depression being the most common (Nock et al. 2013, 300–310). It is noteworthy to mention here, that there has been reports or indicators on the strong correlation between depression and social media usage (Vidal et al. 2020, 235-253; Boers et al. 2019, 853-859). In

addition, it has been found that there is high probability (as high as 42 %) of suicidality among adolescents and children with intellectual disability (Ludi et al. 2012, 431-440).

By employing appropriate assessment, promoting protective factors, offering targeted treatment, utilizing community resources, and connecting individuals with mental health providers, the risk of suicide among individuals can be mitigated (Hua et al. 2024, 1-17).

Having supportive environments are crucial for reducing suicide risk among adolescents, particularly with adolescents that fall within the minority in the society. Social support has been proffered as one of the most effective protective factors (Reed & Adams, 2020, 1-31).

### 3.3 Social Media and Social Media Usage

While different social media platforms offer a diverse range of experiences, they all share a similar feature. Users generally create profiles, connect with their social circle, and utilize the platform as a space to express their thoughts, share visual content, and disseminate information (Kietzmann et al. 2011, 241-251; Moreno & Whitehill, 2014, 91-100). Social media platforms are mostly used by individuals to share information about their personal lives as well as experience other people's lives or even profiles created by businesses and organizations to promote their goods and services. Several of these social media platforms incorporate different mechanisms for users to express their opinions on issues or contents, also the ability to restrict views on posts and comments (Moreno & Whitehill, 2014, 91-100).

As of the first quarter of 2024, the population of social media users has reached approximately 5.17 billion globally, marking an immense continuous growth from previous years i.e., 2.2 billion in 2015 (Kemp 2024). Social media platforms such as Facebook lead the landscape, with over 3.07 billion monthly active users globally. Other major social media platforms include YouTube with 2.5 billion users and Instagram and WhatsApp, each having around 2 billion monthly active users (Dean 2024).

These social media platforms (see Table 1) can be divided into two categories: highly visual social media (HVSM) and others. HVSM includes Instagram, TikTok, YouTube, and Snapchat. While the other group is mainly comprised of Facebook, Reddit, and X (formerly Twitter) (Sagrera et al. 2022, 1-14). Interactive features like comments, likes, and stories are common on HVSM platforms. McCrory et al. (2022) described how these features can lead to intense emotional highs and lows, resulting from the instant gratification of positive feedback and the instant feeling of inadequacy from negative feedback (McCrory et al. 2022, 167-184) In this section, we provide an overview of the most widely used social media platforms, with focus on those having high levels of active users.

Table 1. List of social media platforms on the internet

Social media applications	Examples
Social networks	Facebook, TikTok, Instagram, X (formerly Twitter), Snapchat, YouTube.
Messengers	WhatsApp, Telegram, Instagram, Facebook Messenger, TikTok, Snapchat
Discussion forums	Reddit, LinkedIn, X
Gaming platforms	Call of duty, Football, basketball (EA sports)

### 3.3.1 Facebook

Facebook continues to be the most used social media platform with over 3 billion active users, despite a decline in users of young demographics. Nevertheless, the platform launched in 2004 remains popular among youths and adolescents as a medium to connect with friends, family and communities. Facebook offers a comprehensive suite of features including groups, events, and marketplace which are utilized by youth for community building and commerce. (AlJazeera.com, 2023.) In recent years, this demography of young people has migrated to new platforms such as TikTok, Snapchat and Instagram. This may be due to the more visually engaging content and youthful experience offered on these other platforms. The study conducted by the Pew Research Center from 2022 in United States reported that only 32% of U.S. teens reported using Facebook, compared

to 71% in 2015. (Vogels et al. 2022.) While in Finland, among the 3.9 million users, adolescents constitute 3.6% (female: 2.1% and male: 1.5%) of Facebook users in 2023 (Napoleoncat.com).

### 3.3.2 TikTok

The rave of the moment among young people and adolescents, TikTok, launched in 2018, has become one of the fastest growing social media platforms for engagements. As of 2024, it has over 1.2 billion active users worldwide. It has gained popularity among young people due its short-form algorithm-driven video content and editing add-ons, viral challenges, and influencer culture which encourages creativity and self-expression which most young people crave. (Mona & Irman, 2024, 127.)

While TikTok usage fosters creativity, excessive use can negatively impact academic performance and social behaviour, as it can lead to addiction and distraction. The addictive usage of the platform has come under scrutiny, a report by Mona & Irman (2024), stated the role of peers in influencing TikTok usage, indicating that adolescents can change from non-users to users of TikTok due to social pressures and motivations from their environment, which can further make worse issues related to social behaviour and addiction.

In Finland, a study conducted on the use of social media and smartphones reported that about 51% of individuals between the ages of 16 to 34 using it weekly. In general, nearly 30% of the entire population spends time on TikTok. (Helsinki Times, 2023.)

### 3.3.3 Instagram

Instagram is a leading platform for visual content, broadly used by youth for sharing photos and videos. It is a key space for self-expression and identity formation (Sood, 2022, 131-132). It is a favourite social media app among Finns, with more than half of the populace active on the app weekly (Helsinki Times, 2023). Among young users aged 16 to 34, three out of four (74%) use Instagram regularly. The platform's focus on aesthetics and lifestyle can contribute to body

image concerns and the culture of comparison among adolescent users (Wells et al. 2021).

Instagram content includes numerous (superficially) authentic images that often depict fanciful body standards. Physical appearance is a key aspect of Instagram, and research have shown that adolescents and young people may experience distress, body dissatisfaction, and pressure to have a look perfect on social media. (Chua & Chang, 2016, 190-197.)

#### 3.3.4 Snapchat

Snapchat is popular among youths and adolescents due to its temporary messaging and multimedia sharing features, which appeal to the youth's desire for privacy and spontaneity. It offers enticing role in peer communication, with features like "snaps" and "stories" aiding real-time interaction and engagement. (Sood, 2022, 131-132.)

While these social media platforms offer several benefits for adolescents, such as enhanced (socio-) connectivity and self-expression, they also offer some challenges, including mental health issues and privacy concerns. Understanding these dynamics is crucial for promoting responsible digital citizenship among youth. (Wahab et al. 2024, 224-237.)

## 4 THE METHODOLOGICAL IMPLEMENTATION

### 4.1 Methodology Approach and Justification

The research approach proposed in this study is a qualitative approach, which involves a comprehensive, descriptive literature review to examine the impact of social media on adolescent mental health. Qualitative research is a research approach that explores and offers deeper insights into real-world issues (Tenny et al. 2017). It involves the collection and analysis of non-numerical (descriptive) data to understand concepts, opinions, or experiences. The approach can be used to gain in-depth insights into a problem or generate new research ideas. Qualitative research is used to answer questions of how and why an event may occur or an experience may be felt instead of how many occurrences of an event or the distribution of such occurrences. It is normally used to ask questions that may provide basic answers and those requiring open-ended answers and explanations (Cleland 2017, 64). This is one of the hallmarks of qualitative research as it can explain processes, trends, and patterns of an observation or observations that may not be easily depicted in numbers. For instance, feelings, thoughts, attitudes, behaviours, experiences, and relationships are often subjective and may be difficult to be accurately reflected in quantity (Foley & Timonen 2015, 1195-1210). In such instance, qualitative research is a good method to capture the subjective views of participants. It a method that is useful when there is need for research to explain the feeling, attitude, thought, experience and behaviour of participants by answering questions of why, how and/or what concerning an event or phenomenon of interest.

Qualitative research ensures that the content of narrative information is not lost by trying to quantify such information. In addition, qualitative research can be used to make more understanding of results or data from quantitative analysis. Take for example, that a quantitative analysis has determined a relationship between length of social media use and level of user satisfaction, but why does this relationship exist? Qualitative research is helpful in further deepening the understanding of such relationship by answering the why question. The study considered information obtained from several techniques such as interviews,

observation, and focus groups (Peters 2010, 35-40). The research used descriptive literature review to collect, describe, and systematically examine existing information about the research topic. The purpose of the research is to present the method structured in stages and to describe its special features as well as ethical and reliability issues. The descriptive literature review is based on the research question and produced descriptive, qualitative answers based on selected research articles.

## 4.2 Planning Phase

The planning phase is designed for a research topic of interest and the research is driven to achieve the set objectives and arrive at a logical conclusion (Choguill 2005). This thesis involves various steps and stages from the conceptualization to thesis title selection and to the writing of the thesis. This thesis work took eleven months from the conceptualization stage to the final writing stage.

Hardt (2014) posited that thesis topic approval, and a topic description normally proceed working on a thesis topic. The thesis topic was chosen on the background of the researchers' experiences during practical training and from working as gig workers in care homes. At first, the topic of this thesis was "Investigating the effect of social media on youth mental health". As the planning phase of the thesis advanced, the title was modified. It became more important to focus on a group that is more vulnerable and to approach the thesis from a broader and balanced perspective. The thesis title was then changed to "Impact of social media on adolescents' mental health". The revised thesis topic provides a better overview and research scope for a group of population, as well as better understanding of the relevance of the topic.

For proper planning, a research design matrix was developed for the thesis. A research design matrix can be in form of a table consisting of rows and columns of major things to be done in a research (Choguill 2005). The advantage of a research design matrix is that it makes researchers to link various components of a study, which ensures that no important parts of study are neglected. Table 2 presents the research matrix of the thesis, which lists the research questions,

hypothesis, variables, techniques of analysis and anticipated conclusions. Moving from left to right of the table ensures that every important step of the research has been included, while reading down the table from top to the bottom gives an overview of the breadth of the research study.

Table 2. Research design matrix for this study

**GOAL:** To gain a deeper understanding of the impact of social media on adolescents' mental health

Research questions	Hypothesis	Variables	Technique of analysis	Anticipated conclusions
1. What are the positive impacts of social media use on adolescents' mental health?	1. The existing literature provides sufficient information and case studies on positive impact of social media on adolescents' mental health to facilitate an in-depth analysis of this topic.	1. Are any positive effects identified?	Literature review of peer-review journal articles, compilations and content analysis.	1. The literature is sufficient to reach a conclusion on Hypothesis 1.
2. What are the negative impacts of social media use on adolescents' mental health?	2. There are sufficient information and case studies in literature on negative impact of social media on adolescents' mental health to facilitate an in-depth analysis of this topic.	2. Are any negative effects identified?	Literature review of peer-review journal articles, compilations and content analysis.	2. The literature is sufficient to reach a conclusion on Hypothesis 2.

### 4.3 Data Collection

This study performed a descriptive literature review to identify the positive and negative effects of social media usage on adolescent mental health, mainly focusing on adolescents within the age range of 10 – 17 years. Relevant published studies were searched and collected from CINAHL, Google scholar, Elsevier, and PubMed. Keywords and phrases were used in the databases to identify relevant research articles that answer the research questions. Using the keywords, phrases and Boolean operators, relevant research articles published between 2014 and 2024 were retrieved from the adopted databases for analysis. The keywords used for searching included *social media*, *adolescent*, *mental health*, *adolescents' mental health*, and *effect on mental health of adolescent*. Articles were evaluated and screened based on their relevance to the title and the research questions of the thesis. The search was further narrowed to more relevant studies by using Boolean operators such as "social media" AND "adolescent" AND "mental health", "social media" AND adolescent OR "adolescent people" AND "mental health", and "social media" AND "effect on mental health of adolescent" OR "adolescent people" NOT "adult". Furthermore, a set of inclusion and exclusion criteria were used to ensure that quality and relevant literature are selected for the study. Inclusion and exclusion criteria for the articles that are included in the study are listed in Table 3.

Table 3. Inclusion and exclusion criteria for data collection

<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
Articles must be written in English language	Articles that were not written in English language
Articles must be peer reviewed journal articles	Articles that were not peer reviewed.
Articles are published between the years 2014 and 2024	Articles that considered youth or adult that are outside adolescent age range
Articles must relate to the topic of social media and its impacts	Articles with missing authors' names

Articles must focus on the adolescent population with age ranging from 10 to 17 years	Articles missing to report the results of interest
Articles must relate to the presence of medical, psychosocial or emotional conditions	

After the search, the identified articles were reviewed to retain those that are relevant to the thesis. This is significant to ensure that the objectives of the study direct the data extraction process. Figure 1 shows the PRISMA flowchart for the review conducted in this study. The PRISMA flowchart provides a visual overview of the screening process and make the selection process transparent, as it details the decision and actions taken at each stage of the review process. It also includes the number of articles recorded at different stages of the process and gives reasons for exclusions.

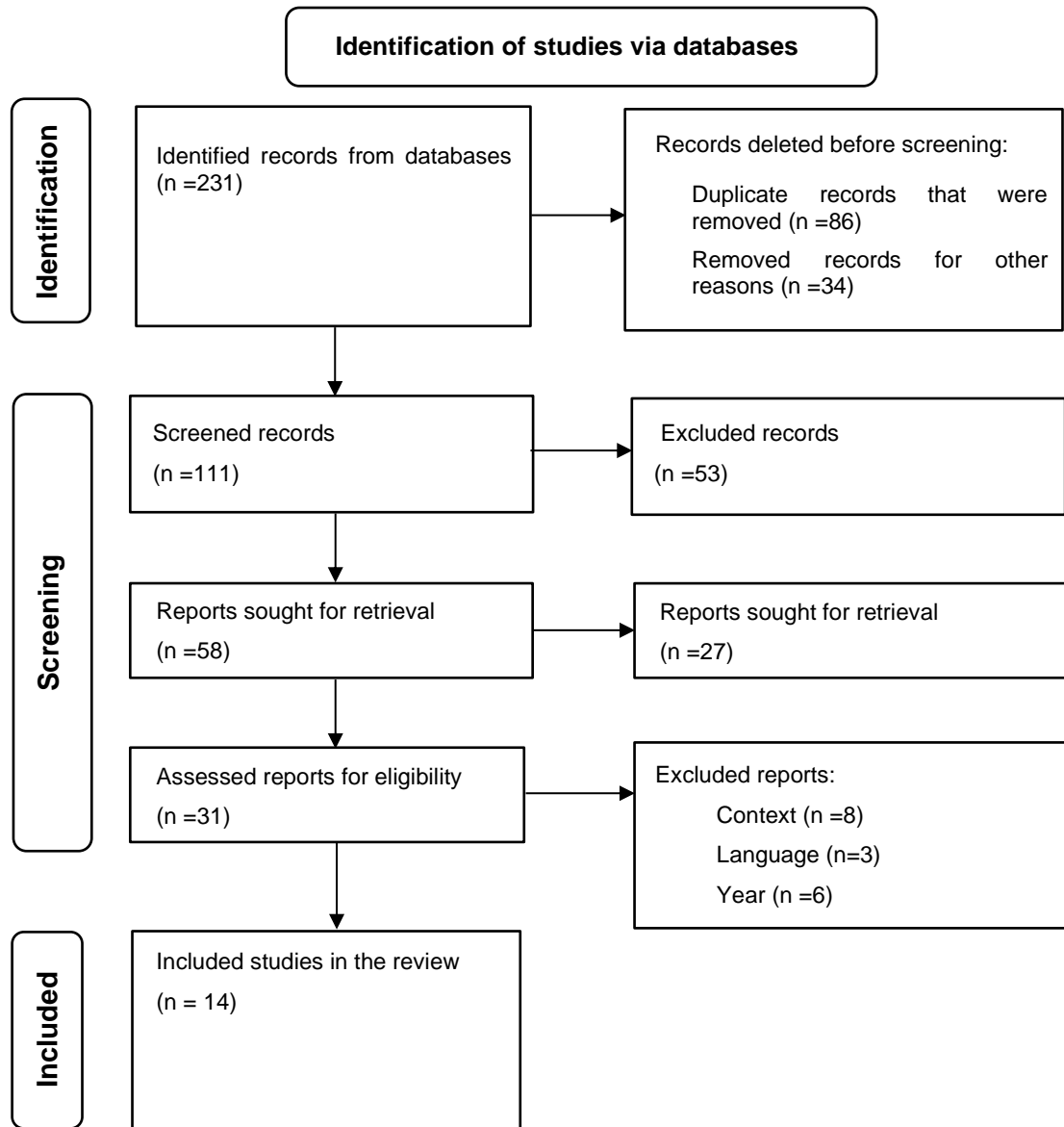


Figure 1. The PRISMA flowchart for review process

The criteria for selecting data sources is defined by using the keywords defined for article identification and a set of inclusion and exclusion criteria. This ensured that only relevant information from reliable sources is incorporated into the study. Table 4 presents the figures of articles obtained in different databases. The table provides an overview of the depth of literature in the study area and show the extent of the literature reviewed.

Table 4. Statistics of articles obtained from different databases.

<b>Database</b>	<b>Keywords</b>	<b>Counts</b>	<b>Selected</b>
PubMed	Social media AND effect on mental health of adolescent OR adolescent people NOT adult	940	Total – 5 3, 4, 10, 11, 12
CINAHL	Social media AND effect on mental health of adolescent OR adolescent people NOT adult	364	Total – 2 2, 7
Elsevier	Social media AND effect on mental health of adolescent OR adolescent people NOT adult	23489	Total – 4 1, 8, 13, 14
Google scholar	Social media AND effect on mental health of adolescent (10 – 17 years) OR adolescent people NOT adult	27200	Total – 3 5, 6, 9

#### 4.4 Data Analysis

The aim of qualitative analysis is to interpret the data and identify resulting themes, to advance the understanding of the phenomenon being study. Elo and Kyngäs (2008) noted that the aim of qualitative analysis is to give a comprehensive description of a phenomenon, with the analysis producing categories that define the phenomenon. Inclusion and exclusion criteria were used to screen identified studies and literature, towards collecting relevant information from each selected study. Results from research articles obtain from literature are systematically collected for analysis. Extracting and synthesizing

data comprises several steps such as collating information, summarizing key points from collated information, aggregating the points, organizing and comparing the evidence from selected articles. The steps ensure systematic assessment and integration of collected information that will lead to detailed understanding of the research study (Li et al. 2017).

An inductive content analysis is adopted in this study for data analysis. Content analysis offers a systematic and logical approach to describing phenomenon, with the purpose of attaining a precise broad description of the phenomenon. Content analysis has a long history of application in nursing studies and can be used to analyse quantitative and qualitative; and can be used in a deductive or inductive way. The phases of inductive content analysis include open coding, making categories and abstraction. Open coding involves creating headings and making notes in the text during reading. The created headings are collected to generate categories, for the purpose of describing observation or phenomenon to gain knowledge and improve understanding. Next is the grouping of the generated categories under higher order headings. This is done to reduce the categories by combining similar categories into higher categories. After making higher categories, abstraction is performed, which is development of a general description of a research study through generation of categories. In this way, subcategories with similar information are grouped into categories, and these categories are grouped into main categories (Elo and Kyngäs 2008).

The research articles considered as relevant to the research questions of the study were organized into a table in Appendix 1. The table includes key information like the title of the article, authors, year of publication and major findings of each study. In addition, an example of the results of the inductive content analysis showing the path from original sentences to reduced sentences to subcategories to upper category and finally to main categories is presented in Table 5 and the full inductive content analysis in Appendix 2.

Table 5. An example of the inductive content analysis performed in this study

Original sentence	Reduced sentence	Sub-category	Upper category	Main category
Adolescents have complaints of not being able to sleep amidst exchanges of messages on social media	Social media use caused inadequate sleep	Later bedtimes	Stress and lack of adequate sleep	Negative impact of social media on adolescents' mental health

## 5 RESULTS

This thesis has explored the various impact of social media on the mental health of adolescents. The research was driven by two research questions: What are the positive impacts of social media use on adolescents' mental health? What are the negative impacts of social media use on adolescents' mental health? This chapter presents the findings of the study and includes a summary and analysis of collated information. Furthermore, it compares the findings of the study with existing studies in literature, providing insights into the trends of results and their agreement or divergence from the findings of previous research.

### 5.1 Positive Impacts of SMU on Adolescents' Mental Health

The findings of the study detailed in Appendix 2 highlights that there are various positive impacts of social media use on adolescents' mental health. These impacts include the following: social connection, communication, positive content, shared interest, awareness, platform for support, resources for coping stress and life satisfaction. In the following subsections, these impacts are discussed in detail.

#### 5.1.1 Social Connection and Communication

The study found that social connection and communication are some of the positive impacts of social media on the mental health of adolescents. It incorporates facets like communicating with friends and friend, being social by interacting with other people, building relationships with friends and family members, and involvement with peers to maintain contact. According to this study, social connections and communication is likely to impact positively on adolescents' mental health by enhancing their social skills and reducing isolation. The study conducted by O'Reilly (2020) established that social media offers a way of communicating with people and makes adolescents to be more social. The results showed that social connection is important for adolescents because it provide the platforms for maintaining friendships, even when adolescents are

separated by distance thus ensuring strong peer relationships. Social skills, strong peer relationships and support networks are crucial for supporting psychological wellbeing of adolescents. This means that social connection has great impacts on the mental health of adolescents as it has the power to influence how adolescents relate with peers, how they function within a group or team, reduce isolation and provide sense of belonging in the society.

The finding by Weinstein et al. (2021) revealed that social media aids adolescents to make new friends and keep in touch with them, as well as provide a means of socialization outside of school and their immediate family. The results show that social connections has a positive impact on adolescents' mental health. Social connection can significantly improve the wellbeing and emotional state of adolescents. In particular, the study found that in a sample of inpatient psychiatry unit residents, remaining connected to existing friends, keeping in touch with people who are far away and making new friends were positively related to social media use. In the study, the adolescents interviewed rely on social media to communicate with friends and family, and maintain social connections (Weinstein et al. 2021).

The findings of Boer et al. (2021) further showed that adolescents may use social networks sites or platforms to maintain contact with friends, indicating social connection with peers. Their study confirmed that instead of neglecting friends, social media use helps adolescents to maintain contact with their friends. This indicate social involvement with peers. They further posited that socializing with peers on social mediate platforms significantly reduces the possibility of loneliness among adolescents.

The finding is also consistent with that of Gustafsson et al. (2023), which reported that social media present new opportunities to adolescents to interact with one another. Specifically, their study show that adolescents used social media to connect and communicate with their friends during COVID-19 pandemic. Therefore, adolescents spent more time online with their friends to interact, which eliminated the communication gap that would have been developed. Through social media use, adolescents were able to minimize the possibility of loneliness

during the period. This shows that social connections and communication positively impact adolescents' mental health.

### 5.1.2 Positive Contents and Shared Interests

Another positive impact of social media on adolescents' mental health is positive content and shared interest among adolescents. Social media present the opportunity to share and access positive content and get awareness about life happenings and trends in the society. Through social media, adolescents can learn skills, get information, and create awareness. Furthermore, the use of social media offers adolescents the opportunity to engage in socially shared interest. These interests may include but not limited to science, art, music, politics, education, gaming, nature, sports, news, reality shows, comics, learning how to play instruments among others. According to the study of Weinstein et al. (2021), positive contents from reliable sources can provide enhancements to social media users, especially when adolescents concentrate on positive things only that will make them feel better. They further reported that there are different social media networks that offer adolescents a great opportunity to have relationships with people who share common interests with them. This give adolescents the opportunity to acquire information or knowledge from other people. A respondent in the study of Weinstein et al. (2021) explained that being on different servers offer him an opportunity to be connected to people who share similar interests with him and was able to learn, became aware of great things and developed in the process.

### 5.1.3 Platform for Social Support

Through the findings of this study, it was evident that social media offers platform for social support. This support may be from friends and family, and they have positive impact on the mental health of adolescents. Adolescents can get supports through texting and private messages, when they seek advice or ask for support from online networks or friends. For instance, the longitudinal study by

Boer et al. (2021) found a positive relationship between social media use and friends' support. Adolescents who are social media users are more likely to interact with online friends, which will enhance the possibility of receiving supports from such friend when needed. This support may range from useful advice on school tasks, usage of musical instruments, learning new things or showing empathy when necessary.

In addition, the study of Weinstein et al. (2021) showed that social media offers the opportunity to reach out to many people when there is need. Digital interactions on social media platforms ensures social support. Social media provides adolescents the accessibility to other people, such as parents and adults for support when there is need for it and such people cannot be immediately reached due to distance. The opportunity to be able to seek or receive support from other people and give supports highlights the positive impact of social media on adolescents' mental health. Furthermore, the study of Boniel-Nissim et al. (2022) reported that active and intense users of social media reported high family support. They explained that social media enhances social capital and ensures connectedness, making friends and school classmates to offer support and receive support when needed. Adolescents tend to benefit more in terms of receiving support when they are familiar with internet and have strong communication skills.

#### 5.1.4 Resources for Coping with Stress

Social networks sites offer resources and mechanisms for coping with stress, which is an important positive impact on the mental health of adolescents. As indicated by O'Reilly (2020), social media relaxes users, and it can be a distraction from happenings around and make them less stressed. Adolescents are frequently subjected to different kinds of stress and pressure from school activities and the need to meet parent and societal expectations. Protecting the adolescents therefore requires them to actively participate in other activities that distract them from their normal routine, reduce stress and promote their wellbeing. Participants in the study of O'Reilly (2020) reported that being

connected to a device prevent them from being stressed and helped them to avoid mental health problems.

The study of Weinstein et al. (2021) also found that adolescents use forums and platforms on social media to obtain advice on strategies and personal relevant issues to cope with stress. Adolescents utilize social media to obtain information and advice on any pressing issues. For instance, a participant in the study of Weinstein et al. (2021) reported using advice on coping strategies obtained from social media forums to resist urge for self-harm, while other participants reported using different apps on social media to help themselves regulate their anxiety. This opportunity presented by social media positively impact on adolescents' mental health.

#### 5.1.5 Life Satisfaction

The use of social media can enhance life satisfaction of adolescents which is an assessment of an individual's quality of life. O'Reilly (2020) reported that social media helps adolescents with life satisfaction, because it distracts them from other things, which is all positive. Adolescents are often faced with a lot of pressures and stress from interference from parents and guardians, deadlines in schoolwork, and peer pressure from friends among others. Therefore, using social media provides adolescents an opportunity to get engage in other things that are not stressful, which ensures life satisfaction for them.

Furthermore, Boniel-Nissim et al. (2022) found that non-active users of social media reported lower levels of life satisfaction compared to active users, while the levels drop among problematic social media users. Their study reported that the non-active users have reduced levels of life satisfaction and support than the active users. This means that with increasing possibility of support offered by social media, adolescents who are social media have increasing life satisfaction than nonusers. This finding agrees with the study of Gustafsson et al. (2023) which reported that normative social media users have higher life satisfactions than non-users of social media. Their study explained that normative social media

users reported low loneliness, and there is positive relationship between high life satisfaction and low loneliness. Thus, using social media reduces loneliness, enhances life satisfaction and this positively impact on adolescents' mental health.

## 5.2 Negative Impacts of SMU on Adolescents' Mental Health

The findings of the study detailed in Appendix 2 highlights that in addition to the positive impacts of social media use on adolescents' mental health, there are also various negative impacts. These impacts include the following: depressive and anxiety symptoms, stress, lack of adequate sleep, triggering contents, misinformation, cyberbullying, hostility, racism, substance use, self-harm and sexual harassment. In the following subsections, these impacts are discussed in detail.

### 5.2.1 Depressive and Anxiety Symptoms

The study revealed that depression and anxiety symptoms are some of the negative impacts of social media on the mental health of adolescents. It incorporates facets like low self-esteem, comparison with others, reduced satisfaction, unfriendly interactions, threats that may lead to poor health, reduced self-worth, assessment of body image, fear of missing out, and loneliness. The study conducted by Bányai et al. (2017) established that adolescents who spend most time on internet and social media are at risk and have very low self-esteem and high level of depressive symptoms. In their latent potent analysis, they discovered that adolescents who use social media for more than 30 hours in a week reported reduced self-esteem and increased level of depressive symptoms than social media users of lesser hours per week. This shows that the longer the use of social media by adolescents, the more the possibility of encountering contents and situation that get them depressed or make them to get anxious.

In another study conducted by O'Reilly (2020), they reported that adolescents have the urge to feel depressed when they compare themselves with models they

see on social media. This finding is also consistent with of the study of Boer et al. (2021), which reported that as the social media use intensity of adolescents increase, there is increase in upward social comparison and they experience increased depressive symptoms and decreased life satisfaction. The desire for adolescents to constantly validate their personality by comparing themselves to others on social media most times result in them feeling less to other people. Weinstein et al. (2021) reported that constant self-denigrating comparison and unfriendly social interactions on social media lead to depressive mood. In their study, a 16-year-old respondent reported that comparing her social feedback to the feedback of her close friends often made her to wonder if she deserves to be in their group. There is tendency to feel sad when such comparison doesn't seem favourable, thereby leading to depressive mood.

The study of Barry et al. (2017) provides additional insight as they reported that an increase in the number of social media accounts will increase the fear of missing out, and correspondingly increasing anxiety and depressive symptoms. Through the constant need to keep up with peers on social media, adolescents are exposed to threats that may lead to poor mental health. The study of Lahti et al. (2024) buttress this point as it reported that frequent exposure of adolescents to social media involves threats that lead to frequent depressive feelings, anxiety symptoms, and poor self-rated health. Their study highlighted that adolescents who encountered threats on social media either on daily or weekly basis are more likely to report feeling anxious, having frequent depressive feelings and poor self-rated health than adolescents without such encounters.

Another aspect comes from the study of Woods & Scott (2016), which reported that social media expose adolescents to other users' profiles that emphasise their positive characteristics, thus diminishing their own feelings of self-worth. This is like the study of Marengo et al. (2018) which reported that assessment of adolescents' own body image because of social media often increase dissatisfaction, leading to the development of depressive and anxiety symptoms. The study found that adolescents who use highly visual social media (HVSM) for content viewing expressed greater dissatisfaction with their body image and increased depressive and anxiety symptoms. The study reported that the effects

become stronger when adolescents use these media for more than 2 hours in a day. In addition, the study of Chen and Fan (2024) reported that adolescents who are problematic internet users are most susceptible to psychopathological risks. As the exposure to and use of social media by adolescents increase, the likelihood of developing depression and anxiety increases.

### 5.2.2 Stress and Lack of Adequate Sleep

Stress and sleeping disorder can emanate from inadequate sleep due to addiction to social media. Weinstein et al. (2021) reported that adolescents who are social media users are often exposed to stress from the need to impress others. The need to meet friends' expectations such as responding to comments and giving support often come with feeling of pressure. A respondent in the study of Weinstein et al. (2021) explained that the expectation that one should always be available or that others should respond to you may be hard to meet, making adolescents to get frustrated and stressed.

Being addicted to social media is a difficult situation for many adolescents, as their connectivity to social media often lead to poor sleep, according to Woods and Scott (2016). Nighttime use of social media and having emotional investment strongly affect sleep by causing later bedtimes. Woods and Scott (2016) explained that social media behaviours of adolescents around bedtime significantly influences their sleep. Similar relationship between use of social media and disturbed sleep pattern was reported by O'Reilly (2020). O'Reilly (2020) reported that adolescents have complaint of not being able to sleep amidst exchanges of messages on social media. In addition, Boniel-Nissim et al. (2023) found that nonactive social media have longer sleep duration and earlier bedtimes compared with active, intense and problematic users of social media. All the studies are consistent that adolescents use of social media make it tedious for them to stop social interaction at bedtime, which affect their sleep duration, pattern and quality resulting in poor sleep.

### 5.2.3 Triggering Contents and Misinformation

Another negative impacts of social media on mental health of adolescents are triggering contents and misinformation. As indicated by O'Reilly (2020), adolescents are exposed to contents on social media that can trigger them, get them pressurised and lead to potential risk for anxiety. This study of Weinstein et al. (2021) also reported that adolescents social media users are at risk of intentionally encountering or unintentionally being exposed to triggering contents that can get them depressed or resort to self-harm. In additional, Chen and Fan (2024) reported that limitations on the contents accessed online were found to reduce adolescent problematic internet use and vice versa. According to the studies, such contents may include but not limited to picture connoting death by hanging, being tagged in contents related to suicide, sad text messages, picture of guns, and other violence-enhancing contents. Adolescents may stumble on most of these contents on social media unintentionally, without any earlier warnings. In instances where social media platforms provides warnings to users, adolescents may ignore content warnings. This can significantly impact the mental health of adolescents, making some of them to become self-isolated, deal in illicit transactions or become suicidal.

Furthermore, the study of Lahti et al. (2024) reported that adolescents who are active users of social media are likely to be exposed to misinformation. The study highlighted that misinformation affects adolescents' judgements and shape their intentions. Misinformation may affect how and what adolescents approve or disapprove things, happenings or situations. This negatively affects the mental health of adolescents, because what they see or hear on social media may not be true representation of issues or situations. Misinformation may also alter adolescents' feeling of security, especially when there are fake news or rumours that tend to make them vulnerable (Lahti et al. 2024).

#### 5.2.4 Cyberbullying, Hostility, and Racism

The study found that cyberbullying, hostility, and racism are some of the negative impacts of social media on the mental health of adolescents. It incorporates other facets like trash-talking, trolling, name-calling, mockery, hate messages, anger, aggression, and frustrations. The study of Craig et al. (2020) found that the use of social media exposes adolescents to risks of being involved in cyber-bullying, and aggression. From the study, it was reported that social media provides a safe anonymous avenue for venting anger and expressing frustrations which can enhance aggressive tendencies among users. Adolescents who are active social media users may be frequently associated with cyber-bullying, in form of victimization and perpetration. The study of O'Reilly (2020) also reported that adolescents get bullied or trolled on social media, with most of the affected not informing their friends or elders, but rather internalize their pains.

Other studies of Boer et al. (2021), Weinstein et al. (2021) and Lahti et al. (2024) all reported similar findings that adolescents who are social media users often face hostility, cybervictimization, mockery, direct exclusion, racism, bullying, trash-talking, name-calling, multiple adversities and hate messages from known and unknown persons or sources. In addition, Naeemi and Tamam (2017) found that negative impacts on different aspects of psychological well-being such as life purpose, autonomy and positive relationships with others can arise due to emotional dependence on Facebook . Adolescents facing any of these facets of cyberbullying can develop suicidal thoughts and resort to self-harm. Therefore, the relationship between mental health and cyberbullying could be explained from the effect of receiving criticism about physical appearance, being excluded from group, receiving anonymous or indirect negative comments, circulation of pictures or fake narrations, comments about race or ethnicity, or impersonation. Any of these elements of cyberbullying, hostility and racism can negatively impact on the mental health of adolescents.

### 5.2.5 Substance Use and Self-harm

Exposure of adolescents to social media use can lead to substance use such as taking alcohol, smoking cigarette or cannabis. Activities and exposure to mental damaging contents on social media can make adolescents experience self-harm. A study published by O'Reilly (2020) reported that adolescents who are active social media users are exposed to contents on self-harm and mental illness, which can increase the possibility of the affected committing suicide. The research established that exposure to contents that are centred around self-harm and mental illness negatively affect adolescents' mental health.

This finding is also supported by the study of Boniel-Nissim et al. (2022) which considered four different types of substance use, namely cigarette smoking, alcohol consumption, drunkenness and cannabis use. They reported that access to substance-related contents on social media influences the rate of substance use, hence the prevalence increases with increasing social media use among adolescents. Online advertisement encourages consumption of alcohol, and cause alteration of social norms because of frequent substance-related contents. These influence the drinking behaviour of adolescents who are exposed to such contents and advertisement. The study further posited that the use of different substances, experience of addiction-like symptoms and possibility of self-harm are likely to be more prevalent among adolescents who are active users of social media than adolescents who rarely use social media (Boniel-Nissim et al. 2022). In addition, Lahti et al. (2024) reported that adolescents who enjoy higher family affluence are more likely to have encounters with distribution or sale of drugs than those with lower family affluence. This is because with higher family affluence, adolescents can afford to stay connected on multiple social media platforms through which they easily get exposed to misleading contents.

### 5.2.6 Sexual Harassment

Another negative impact of social media on the mental health of adolescents is sexual harassment. Many social media platforms and networks promote

sexuality, exposing adolescents to contents about sex, and generally indecent way of life. The study of Lahti et al. (2024) reported that sexual harassment is part of the threats that adolescents experience on social media, with the affected adolescents more likely to have poor-self rated health, frequent anxiety and depressive symptoms, compared to those who are non-users of social media and may not experience online sexual harassment. Social media expose adolescents to sexual contents, and the study found that girls are more likely to be exposed to sexual harassment than boys. As revealed by the study, problematic users of social media are more than five times likely to get exposed to sexual harassment than normative or non-users of social media. When adolescents have such encounters on social media, there is increased possibility that they will have frequent depressive and anxiety feelings and report poor self-rated health than those without such encounters. Adolescents may grow up with damaged state of mind because of sexual harassment from social media and end up suffering a range of behavioural and psychological problems.

## 6 DISCUSSION

The increasing social media use among adolescents in the past decade has been raising concerns about the impacts it can have on adolescents' mental health. The purpose of this study was to explore social media's impact on adolescents' mental health. This study reviewed fourteen published articles to answer the research questions and deepens understanding of the topic. The objectives of the study are fulfilled, and the positive and negative impacts of social media on adolescents' mental health are discussed in the study. The review revealed that how an adolescent uses social media determines its effect on their mental health. The review indicated that there are positive and negative effects of using social media on adolescents' mental health. The findings of the literature review conducted in this thesis are similar and consistent with previous studies on the impact of social media use on adolescents' mental health (Radovic et al. 2017, 166-171; Hardy & Castonguay 2018, 282-290).

The common subthemes regarding positive impacts include social connection and communication, positive content and awareness, social and family support, resources for coping with stress, shared interests, and life satisfaction. These findings are in agreement with the findings of previous studies (e.g., Radovic et al. 2017, 166-171, Uhls et al. 2017, S68- S69; Abbas & Mesch 2018, 63-79 ; Nesi et al. 2018, 267–294; Mitev et al. 2021, 22-23). The studies of Radovic et al. (2017) and Nesi et al. (2018) reported social support, possibility of access to positive content and social connection as positive impacts of social media use on adolescents' mental health. The findings of Uhls et al. (2017) that the use of social media among adolescents increases their social capital through shared resources and lead to increased social support are consistent with those established in this study. In addition, the findings of this study that problematic and non-active users of social media reported lower levels of social support and life satisfaction are consistent with the studies of Abbas & Mesch (2018) and Mitev et al. (2021), which concluded that social media provides the platform for feeling connected and increasing social capital. These indicate that social media has possible benefits to adolescents mental health, provided its use is not problematic, which agree with the hypothesis in Przybylski & Weinstein (2017).

The common subthemes regarding negative impacts include depressive mood and anxiety, stress and lack of adequate sleep, triggering content and misinformation, cyberbullying, hostility and racism, substance use and self-harm, and sexual harassment. These findings agree with the findings of previous studies (e.g., Westgate & Holliday 2016, 27–30; Frison & Eggermont 2017, 603-609; Radovic et al. 2017, 166-171; Uhls et al. 2017, S68- S69; Tandon et al. 2020,1-9; van Den Eijnden et al. 2021, 6-10; Balamurugan et al. 2024, 1-18; Politte-Corn et al. 2024, 45). Consistent with the present study, Frison and Eggermont (2017), Balamurugan et al. (2024) and Politte-Corn et al. (2024) found that adolescents who are social media users are at increased risk of getting depressed than non-users. In consistence with the present study, Radovic et al. (2017) and Uhls et al. (2017) reported that social media use expose adolescents interacting with strangers, getting exposed to triggering content, and negative online interactions leading to hostility and cyberbullying, which can reduce their self-esteem. The studies of van Den Eijnden et al. (2021) and Tandon et al. (2020) reported that the intensity of social media use greatly influences adolescent's tendency to go to bed late. This is consistent with the present study's findings that addiction to social media can result in stress and sleeping disorder resulting from inadequate sleep. The findings of Westgate & Holliday (2016) and Uhls et al. (2017) that substance-related contents are regularly accessed on social media by adolescents is the same with the position of the present study that adolescents that who are active social media users may engage in taking alcohol, smoking cigarette or cannabis, and causing self-harm. Furthermore, the findings of this study that social media expose adolescents to contents about sex and other immoralities agree with the position of Uhls et al. (2017) that adolescents are susceptible to risky behaviour such as sexual activity on social media. The rate of self-harm is alarming that in Finland, there are helplines for people who are at the risk or who know people considering self-harm, as shown in the table below. To be proactive enough, there is a helpline dedicated to the age group of adolescents to combat the likelihood of self-harm like suicide because it has since been recognised as a major issue in the society.

Important tip: If you are contemplating suicide or know someone struggling with suicide thoughts, you are not alone. There are always people who can help. In Finland, there are free helplines and forums available for anyone (including adolescents) experiencing suicidal thoughts.

sekasin.fi (call:20110) – adolescents/youth between 12-29 yrs.

mieli.fi (call: 0925250111, 0925250116) – crisis helpline

mtkl.fi (call: 020391920)

monikanaiset.fi (call: 080005058)

Before this research, the authors thought that the positive impacts of social media on adolescents' mental health may be very limited that it can be neglected. However, the perception has changed with this research as it found that along with the numerous negative impacts of social media on adolescents' mental health, there are also positive impacts. The study has revealed that the impacts of social media on mental health of adolescents depend on how they use it. It is imperative for adolescents' social media users to practice safe social by focusing on contents that will add positive values to them. It is equally important for them to have knowledge on choosing the right social media platforms and be able to exercise self-restraint when necessary. Depending on individual adolescent and their prevailing environments, appropriate use of social media should revolve around understanding of potential risks, intellectual growth, and self-regulations. Adolescents can have best outcomes from using social media when they are able to set limits and boundaries in the way they use it.

This research contributes to the study area by reviewing findings in literature published in the last decade and logically presented the findings. It combines many information that were hitherto scattered in literature in a way that positive and negative impacts of social media on adolescents' mental health can be assessed, discussed, and compared in a research study. It also deepens the understanding of the connection between social media use and adolescents' mental health of the adolescents. This research will help in policy formulation on mental health, welfare and education that can meet the special need of adolescents. It will enhance the understanding of parents and guardians on the gain and challenges of using social media. This will lead to better support systems that will aid adolescents to maximize the benefits of using social media. In addition, by identifying risks associated with social media through this study,

intervention measures can be defined for adolescents to help them promote positive impacts of using social media, such as learning towards academic success and technical know-how.

However, this study has its own limitations. The research is a review study, which means it used findings from published articles. Therefore, any bias in the findings reported in the articles is automatically transferred to this study. Another limitation may be publication bias, which may arise because it is often more desirable to publish studies that have significant additions to the study area even though studies with incremental significance may be a pointer to an underlying pattern, sequence, or trends. This can create bias in the number of articles available for review and subsequently affect the result of this study. Additionally, the content analysis used in this study was not the strongest data analysis approach because it only reported the occurrence of an impact without giving information about the prevalence among considered population. Yet, this was the appropriate approach for this study because it was intended to compile and present findings of previous studies. Therefore, based on the limitations, the results of this study should be adopted with caution.

## 7 ETHICAL AND RELIABILITY CONSIDERATIONS

Research ethics provide instructions on how to conduct research in a way that is responsible and uphold the integrity of the scientific process. Research ethics includes several factors such as approvals and permissions, informed consent, the relationship between researchers and participants, confidentiality, data collection, result reporting, and storing (Hollway & Jefferson, 2012). In principle, there is a need for approval and permission to perform the study, after which data gathering can start. The identity of the participant must be protected, information must be kept secure and confidential, and consent appropriately obtained. The access, use, storage and sharing of data must be transparent, and should be easily communicated and accessible to the public. The informed consent means that participants decide on their own to participate in the study or not. There should be documentation of all the stages of research design and data collection, cleaning, coding, and analysis to make the process transparent and to maintain the integrity of the study (Halej 2017, 1-13). In implementation, this thesis made use of data already published in literature. Therefore, research permits were not required. Since this study relied on information already published in literature, the researcher-participant relationship was maintained because the study did not conduct interviews to obtain information for analysis but merely relied on already published information. All the data sources are referenced, and due acknowledgement are provided. The analysis of data in the thesis is performed in a way that does not disclose the identity of any respondent, so that there is privacy as much as is required, which ensures confidentiality and privacy of respondents. In addition, the study ensured data access to the database developed, production transparency, and analytical transparency.

The trustworthiness of a qualitative research includes credibility, which is about accuracy of data collection; dependability, which means detailed description of the procedures and analysis in the study; transferability, which means the flexibility in transferring the findings to other situations; and confirmability, which is largely an issue of findings presentation (Anney, 2014). In implementation, to ensure accessibility to data, the study referenced the data used. To ensure production transparency, the developed database in the study was shared and provided in the appendices. This principle will prevent unethical practice of

misrepresenting or importing unreported data. To ensure transparency, there was a clear delineation of the link between the data and the conclusion of the research. The study comprehensively explained the processes that led to the conclusion that will be reached based in the study. To ensure reliability of the research, the thesis defined research questions and methodology clearly and logically. The study ensured that research question and objectives are specific, achievable, measurable, relevant, time-bound, and relevant, and the analysis of data collected are aimed at answering those research question and objectives. Results are accurately and transparently interpreted and limitations and /or implications are addressed and documented.

## 8 CONCLUSION AND RECOMMENDATIONS

This study reviewed selected articles on the impact of social media on the mental health of adolescents. The findings were mixed, with results showing positive and negative impacts of social media on mental health of adolescents. The study found positive impacts of social media use to include social connection and communication, positive content and awareness, social and family support, resources for coping with stress, shared interests, and life satisfaction, while the negative impacts include depressive and anxiety symptoms, stress, and lack of adequate sleep, triggering content, misinformation, cyberbullying, hostility and racism, substance use, self-harm, and sexual harassment. From the results, the study conclude that social media usage has several impacts on adolescents' mental health.

The results on the positive impacts of social media agree with social support theory, which asserts that social interactions can reduce stress, provide support and improve overall wellbeing. Most adolescents use social media as platforms to connect and communicate with family and friends, receive social support and cope with stress, which enhances their sense of belonging. This also aligns with positive psychology, which emphasize the importance of positive experiences in improving mental health. In addition, by adolescents using social media to relate with peers of like minds, it creates supportive environments which enhances their emotional health, and this aligns with the sense of community theory. In addition, adolescents use social media for expression and to advocate for a cause, create positive content, share interests, and create awareness. This enhances their ability to effect changes and make choices, and this is consistent with the empowerment theory.

The results on the negative impacts of social media agree with social comparison theory, which suggests that there is individual comparison to affirm self-worth. Exposure to triggering content, hate messages, strangers, bullying among others on social media may lead to adolescents engaging in comparison with others, leading to reduced self-worth, low self-esteem which can escalate to depression, anxiety, substance use, self-harm etc. Exposure of adolescents to cyberbullying,

triggering content, misinformation, sexual harassment, hostility and racism on social media and lack of adequate sleep create situations that cause stress for them. This is in line with the stress generation theory which highlights that individuals may create stresses in their lives. These stresses cause mental health problems or aggravate existing ones, such as having depressive and anxiety symptoms. In addition, interactions and exposure on social media which encourages substance use, sexual harassment and racism can lead to negative experiences, resulting in anxiety, low self-esteem, depression, and self-harm. This agrees with cognitive behavioural theory which posits that having unhealthy social media interactions promote negative thoughts, which can affect mental health negatively.

While social media offers adolescents several opportunities and gains, the negative impacts of social media on adolescents' mental health are multifaceted and very profound. The negative impacts are often intertwined with multiplier effects on adolescents' emotional and psychological wellbeing. This study shows that the quality and awareness of social media interactions is key. Positive connections can enhance the wellbeing and improve the understanding of adolescents on important issues, while negative experiences on social media can aggravate mental health issues. Therefore, as social media continue to be at the centre of adolescents' lives, there is need for promotion of awareness and provision of support to help them navigate social media platforms to maximize benefits and improve their overall wellbeing.

Most studies on the impact of social media on adolescents' mental health considered social media as one, without considering the contribution of each social media platform. Moving forward, future research should consider the impact of different social media platforms on adolescents' mental health, average time spent on each platform and the type of content that each platform is known for. By being specific about social media platform, the research results will be more accurate to promote awareness on the contribution of each platform to the impacts on adolescents' mental health, and to create coping strategies and education on the effective use of each platform. Providing such insights will help

education planners, policy makers, parents and guardians to better understand the impacts of various digital platforms in shaping the lives of adolescents.

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APPENDICES

Appendix 1. List of Research Articles used in the Study

Appendix 2. Research Results

## Appendix 1. List of Research Articles used in the Study

S/N	Database	Authors	Topic	Year of publication	Source	Result of article
1	Elsevier	Boniel-Nissim et al.	International perspectives on social media use among adolescents: Implications for mental and social well-being and substance use	2022	Computers in Human Behavior	The article shows that problematic users have the poorest social and mental well-being profiles, coupled with the highest level of substance use, while intense non-problematic users reported the highest levels of social well-being.
2	CINAHL	Boer et al.	Social media use intensity, social media use problems, and mental health among adolescents: Investigating directionality and mediating processes	2021	Computers in Human Behavior	The article highlights that social media use problems predict elevated levels of cybervictimization and upward social comparisons.
3	PubMed	Gustafsson et al.	Mental health profiles of Finnish adolescents before and after the peak of the COVID-19 pandemic	2023	Child and Adolescent Psychiatry and Mental Health	It is shown in the article that adolescents in the "Good mental health" profile were primarily normative social media users, having

						low loneliness, high life satisfaction, and infrequent health complaints.
4	PubMed	Bányai et al.	Problematic social media use: Results from a large-scale nationally representative adolescent sample	2017	PloS one	The results showed that 4.5% of the adolescents were in the at-risk group, and reported high level of depression symptoms, low self-esteem, and increased social media use.
5	Google Scholar	Lahti et al.	Social media threats and health among adolescents: evidence from the health behaviour in school-aged children study	2024	Child and Adolescent Psychiatry and Mental Health	The article highlights adolescent are exposed to social media threats in various ways. PSMU and online communication with strangers are linked to anxiety symptoms, frequent depressive feelings, and poor self-rated health.
6	Google Scholar	Naeemi, S., & Tamam, E.	The Relationship Between Emotional Dependence on Facebook and Psychological Well-Being in Adolescents Aged 13–16	2017	Child Indicators Research	The article shows that emotional dependence on Facebook has negative association with overall psychological well-being of adolescents.

7	CINAHL	Craig et al.	Social Media Use and Cyber-Bullying: A Cross-National Analysis of Young People in 42 Countries	2020	Journal of Adolescent Health	The study found associations among problematic social media use, cyberbullying, and frequent contact with strangers and cyber-bullying and posited that increased exposure and use of social media may elevate the risk of cyber-victimization.
8	Elsevier	Boniel-Nissim et al.	Adolescent use of social media and associations with sleep patterns across 18 European and North American countries	2023	Sleep Health	The article results show that both intense and problematic social media users were associated with later bedtimes, shorter sleep duration, and greater social jetlag in adolescents, while the tendencies were significantly lower among nonactive social media users.

9	Google Scholar	Weinstein et al.	Positive and negative uses of social media among adolescents hospitalized for suicidal behavior	2021	Journal of Adolescence	The study found that most participants reported mixed experiences with social media use, including both positive and negative aspects.
10	PubMed	O'Reilly, M.	Social media and adolescent mental health: the good, the bad, the ugly	2020	Journal of Mental Health	The article highlights that adolescent reported using social media to protect their mental health, reduce isolation, and improve social skills while mental health practitioners acknowledged the benefits of social media for promoting mental health, particularly for vulnerable groups.
11	PubMed	Woods & Scott	#Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem.	2016	Journal of Adolescence	The article found that Adolescents who used social media more experience higher levels of anxiety and depression, lower self-esteem, and poorer sleep quality.

12	PubMed	Barry et al.	Adolescent social media use and mental health from adolescent and parent perspectives	2017	Journal of Adolescence	The article reported that anxiety and depressive symptoms were highest among adolescents with a relatively large number of parent-reported social media accounts and high levels of FOMO.
13	Elsevier	Marengo et al.	Highly-visual social media and internalizing symptoms in adolescence: The mediating role of body image concerns	2018	Computers in Human Behaviour	The study found that students reporting frequent use of more than 2 hours per day of HVSM had significantly higher body image concerns and internalizing symptoms than peers who reported no use of HVSM.
14	Elsevier	Chen & Fan	Adolescents' mental health, problematic internet use, and their parents' rules on internet use: A latent profile analysis	2024	Computers in Human Behaviour	The article found that adolescents who are experiencing psychopathological issues such as depressive symptoms, anxiety, and loneliness were more likely to engage in problematic internet use.

## Appendix 2: Research Results

Original sentence	Reduced sentences	Sub-categories	Upper category	Main category
Impact of social media on adolescents' mental health				
Social media offers a way to communicate with people and makes adolescents to be social.	<ol style="list-style-type: none"> <li>1. Communication</li> <li>2. Social media makes adolescents to be social</li> </ol>	<ol style="list-style-type: none"> <li>1. Social connection and communication</li> <li>2. Social contact with friends</li> </ol>	Social connection and communication	
Social technologies helps adolescents to stay socially connected with distant family, and friends during extended absences.	<ol style="list-style-type: none"> <li>1. Social connection with friends and family</li> </ol>			
Social media presents new opportunities for adolescents to interact with others and has little experiences of loneliness.	<ol style="list-style-type: none"> <li>1. Social involvement with peers to maintain contact</li> </ol>			
High social media use intensity may serve as a way to maintain contact with friends and can be indicative of social	<ol style="list-style-type: none"> <li>1. High social media use can ensure contact with friends</li> </ol>			

involvement with peers, rather than neglecting friendships.				
Positive content from reliable sources can provide enhancements to social media users, especially when adolescents follow positive things that will promote their well-being.	1. Positive contents provide enhancement to adolescents who are social media users	1. Positive contents for adolescents 2. Source of shared interests	Positive contents and shared interests	
Social media networks that offer adolescents a great opportunity to have connections to people who have shared interests with them.	1. Source of shared interests for adolescents			
There is a positive correlation between social media use intensity and offline social interaction with friends' support	1. Social media use enhances friends support and interaction	1. Friends support and interaction 2. Interactions on social media may enhance support	Platform for Social support	
Social support needs can be met through digital interactions, and the use of social technology may	1. Digital interactions ensure social support and safety planning			

facilitate aspects of traditional safety planning		3. Platforms for adolescents to give and receive support		Positive impacts of social media on adolescents' mental health
Social media serves as a platform that enhances social capital and feelings of connectedness, where intense non-problematic social media users receive support from friends and classmates.	1. Social media is a platform for support			
Social media relaxes users, and it can be a distraction from happenings around and make adolescents' less stressed.	1. Social media relaxes adolescent's users 2. Reduced stress due to social media use	1. Reduction in stress among adolescent social media users	Recourses for coping with stress	
Forums and platforms on social media can be used to obtain advice on strategies and personal relevant issues to cope with stress.	1. Platforms for obtaining strategies to cope with stress	2. Coping strategies for stress		
Social media help adolescents with life satisfaction, because it	1. Distractions from unnecessary things	1. Distractions from unnecessary		

positively distracts them from other things.	2. There is enhanced life satisfaction	things give life satisfaction	Life satisfaction	
Non-active social media users have lower levels of life satisfaction compared to active users.	1. Active social media users have life satisfaction	2. Adolescent social media users have life satisfaction		
Normative social media users have higher life satisfactions than non-users of social media, and they don't experience frequent health complaints nor low loneliness.	1. Social media use leads to high life satisfactions 2. Social media use reduces loneliness	3. Reduced loneliness means higher life satisfaction		
Adolescents who spend most time on internet and social media are at greater risk and have highest level of depressive symptoms and lowest self-esteem.	1. Social media may result in low self-esteem 2. Possibility of depressive symptoms	1. Low self-esteem and depressive symptoms		

<p>Adolescents have the urge to feel depressed when they compare themselves to models and others they see on social media.</p> <p>As the social media use intensity of adolescents increase, there is increased social comparison, increased depressive symptoms and decreased life satisfaction.</p>	<ol style="list-style-type: none"> <li>1. There is comparison with other people</li> <li>2. Possibility of getting depressed</li> </ol>	<ol style="list-style-type: none"> <li>2. Comparison</li> <li>3. Reduced satisfaction</li> <li>4. Unfriendly interactions and comparison</li> <li>5. Threats may lead to poor health</li> </ol>		
<p>Constant self-denigrating comparison and unfriendly social interactions on social media lead to depressive mood.</p>	<ol style="list-style-type: none"> <li>1. There is unfriendly social interactions</li> <li>2. Self-denigrating comparison</li> </ol>	<ol style="list-style-type: none"> <li>6. Reduced self-worth</li> <li>7. Body image assessment</li> <li>8. Fear of missing out</li> </ol>		
<p>Frequent exposure to social media involves threats that lead to depressive and anxiety symptoms, and poor self-rated health.</p>	<ol style="list-style-type: none"> <li>1. Exposure to threats</li> <li>2. Threats cause poor self-rated health</li> </ol>	<ol style="list-style-type: none"> <li>9. Loneliness</li> </ol>	<p>Depressive and anxiety symptoms</p>	

Social media use can lead to lower self-esteem, because increased exposure to other users' profiles may diminish one's own sense of self-worth.	1. Reduced feeling of self-worth from increased social media use			
Assessment of own body image increases of dissatisfaction, which makes the development of depression and anxiety symptoms more likely.	1. Assessment of own body image			Negative impacts of social media on adolescents' mental health
An increase in the number of social media accounts will increase the fear of missing out, and higher levels of anxiety and depressive symptoms.	1. Depressive and anxiety symptoms			
Adolescents who are problematic internet user are most susceptible to psychopathological risks such as depressive symptoms, anxiety, and loneliness.	1. Problematic internet use leads to loneliness			

Adolescents have complaint of not being able to sleep amidst exchanges of messages on social media.	1. Social media use causes inadequate sleep	1. Inadequate sleep 2. Stress 3. Later bedtimes			
There is stress from the need to impress others, fear of missing out on the company of others or being left out by peers.	1. Fear of missing out leading to stress		Stress and lack of adequate sleep		
Nonactive social media have earlier bedtimes and longer sleep duration compared with active, intense and problematic social media users.	1. Active users have shorter sleep duration and later bedtimes				
Nighttime-specific social media use and emotional attachment to social media are related to poor sleep.	1. Social media use at night time can result in poor sleep				
Adolescents are exposed to contents that can trigger them and can lead to anxiety.	1. Triggering content may cause anxiety				

<p>There is risk of intentionally encountering or unintentionally being exposed to triggering content that can get them depressed or resort to self-harm.</p>	<p>1. Adolescents get depressed from triggering contents</p>	<p>1. Triggering content</p> <p>2. Misinformation from exposure to social media</p>	<p>Triggering contents and misinformation</p>	
<p>Restrictions on the content viewed online can help reduce problematic internet use among adolescents.</p>	<p>1. Online contents have effects on adolescents</p>			
<p>Active social media users are more likely exposed to misinformation and contents causing pressures.</p>	<p>1. Exposure to misinformation</p>			
<p>Social media use exposes adolescents to risks of being involved in aggression and cyberbullying. Social media provide a safe anonymous avenue for venting anger and expressing frustrations which enhance aggressive tendencies on social media.</p>	<p>1. Exposure to cyberbully</p> <p>2. Adolescents can be exposed to anger and frustrations</p>	<p>1. Adolescents face cyberbullying, trash-talking and hostility</p> <p>2. Racism and hate messages</p>		

Adolescents get bullied or trolled on social media, with most of the affected not informing their friends or elders but internalize their pains.	<ol style="list-style-type: none"> <li>1. Adolescents may be bullied or trolled</li> <li>2. Internalization of pains</li> </ol>	3. Anger and frustrations	Cyberbullying, hostility, and racism	
Adolescents who are exposed to social media face hostility, mockery, bullying, trash-talking, name-calling, and hate messages from known and unknown persons or sources.	<ol style="list-style-type: none"> <li>1. Possibility to experiences bully, trash-taking and hostility</li> <li>2. Adolescents may receive hate messages</li> </ol>			
Cyberbullying and racism are part of the threats that adolescents experience on social media	1. Exposure to cyberbullying and racism			
Increased intensity of social media use leads increased social comparisons, cybervictimization and make adolescents to face multiple adversities.	1. Adolescents may face multiple adversities			
Adolescents who are active users of social media are exposed to	1. Some contents may cause self-harm	1. Self-harm	Substance use and self-harm	

<p>contents on self-harm and mental illness, which can increase the possibility of the affected committing suicide.</p>	<p>2. Adolescents may become suicidal</p>	<p>2. Substance use</p>		
<p>Access to substance-related content on social media influences the rate of substance use, so the prevalence increases with increasing social media use.</p>	<p>1. Increased substance uses because of social media exposure</p>			
<p>Sexual harassment is a threat that adolescents experience on social media, with those affected more likely to report poor-self rated health, anxiety symptoms, and frequent depressive feelings, compared to adolescents who are not active users of social media and may not experience online sexual harassment.</p>	<p>1. Adolescents who are active users of social media may experience sexual harassment and report poor-self ratter heath</p>	<p>1. Adolescents are exposed to sexual harassment</p>	<p>Sexual harassment</p>	