

Social media and its effects on adolescents' mental health

Bachelor Thesis for Obtaining the Degree

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Affidavit

I hereby affirm that this Bachelor's Thesis represents my own written work and that I have used no sources and aids other than those indicated. All passages quoted from publications or paraphrased from these sources are properly cited and attributed.

The thesis was not submitted in the same or in a substantially similar version, not even partially, to another examination board and was not published elsewhere.

Abstract

The aim of this paper is to investigate the relationship between social media and its effects on adolescents and their mental health and body image. Adolescents born in the time of social media, are not aware of how much it affects them. The theory suggests that by using social media, and all other social media networks, your mental health will start to decline, meaning that social media, mental health, and body image are somewhat connected.

The research used a quantitative research approach. An online survey was conducted. The self-reported data was from a sample of 78 participants aged between 15 – 36. Participants were instructed to complete a battery of validated scales measuring social media use, mental health symptoms, and body image perceptions. The data was analyzed using suitable statistical methods.

In this sample, the results suggest that social media use alone may not be a significant indicator of signs of mental illness such as depression and anxiety or body image concerns. That is in contrast with other research (Fardouly & Vartanian, 2016, Marino et al., 2018, McDougall et al., 2016, Sha & Dong, 2021).

It is recommended that more studies be conducted to get a more in-depth understanding of this complex relationships and to investigate other variables that may contribute to the results of social media usage, mental health problems and body image concerns of adolescents.

Keywords: Social Media, Mental Health, Body Image, Adolescents, Social Media Usage, Social Media and its Effects

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1 Introduction

1.1 Problem statement

The internet is an emerging tool that is becoming increasingly important in people's daily lives around the globe, particularly younger individuals (Akin & Iskender, 2011). It is now a widely acknowledged fact that young individuals are suffering from a mental health crisis (McCrae, 2019). Social media has a detrimental effect on mental health of the present population. Social media use is becoming ever more common in the adolescent developmental environment, influencing how adolescents use their free time and maintain social interactions (Bozzola et al., 2022).

Adolescence is the period of life during which well-being ranges the most, risk-taking is at its highest, and mental diseases, such as depression, are most common. The World Health Organization (2021) stated that worldwide mental disorders affect one in seven adolescents between the ages of 10 and 19. Substance abuse to suicide is just a few of the problems that any mental illness can lead to. Not only might adolescents suffer from mental health problems, but some of them also encounter online bullying. Online bullying is called cyberbullying, which is bullying that involves all internet technologies (UNICEF, 2023). For the past ten years, cyberbullying has become a comparatively recent type of bullying (Nixon, 2014). Cyberbullying is a growing problem that has been associated with using social media, and it has become a substantial health concern that leads to mental and behavioral problems and could lead to an increased risk of self-annihilation (Garett et al., 2016). It relates to mental health, but it occasionally leads to adolescents not wanting to go to school, skipping class, having physical disagreements, etc. Moreover, the well-being and health of teenagers are all at risk due to cyberbullying (Nixon, 2014).

Researchers have researched the relationship between social media use and mental health problems. Much research concluded that there is not enough evidence, as well as mentioning that the connection between the usage of social media and mental health problems is not straightforward, as there are too many influencing elements (Coyne et al., 2020, Keles et al., 2019, Valkenburg et al., 2022). While other research has suggested that even though numerous factors endorse depression there is an association between the two mentioned variables (Primack et al., 2021).

Moreover, several studies concluded that there is a positive correlation between mental health problems, which include anxiety and depression, and social media usage (Marino et al., 2018, McDougall et al., 2016, Shensa et al., 2020). Likewise Akin & Iskender (2011) identified that internet addiction was discovered to also be positively correlated with stress, anxiety, and depression via using the correlation analysis.

The following are the questions which this thesis attempts to answer:

1. How does social media effect adolescents' mental health?
2. How does social media effect adolescents' body image?

This thesis analyzes how social media affects adolescents' mental health and body image. The final goal of this research paper is to understand that if by using social media, and all other social media networks, either mental health or body image declines. The topic is important because people, especially adolescents born in the time of social media, are not aware of how much it affects them. Furthermore, that would mean that social media, mental health, and body image are somewhat connected.

To advance this literature stream, this thesis will study how social media usage affects adolescents, their mental health, and their body image. This research will also help specify the already presented literature in the world. It will help conduct that in the following ways; firstly, it will provide further research into social media's effects on mental health. Secondly, it will provide more details into social media and its impact on mental health. Additionally, findings will further explain the connection between social media and youngsters' body image. Finally, results will help to understand further the connection social media has to adolescents.

This paper is divided into broader sections which are connected to adolescents' mental health and body image. The first part is the introduction of the paper, where the topic is presented. Next is the literature review, which provides more in-depth information about social media usage, mental health and body image. The next part is methodology, where the research design, the methods and the survey are explained. Following is the results section, which explains the outcomes of the

calculations and explanations. After that is the discussion and implications section, which discusses theoretical implications, future research and ethical consideration. Lastly the conclusion of the paper, where conclusions on the topic are drawn.

2 Literature review

2.1 Benefits and drawbacks of social media

Section 2.1 explores social media and the benefits and drawback that follow. Carr & Hayes (2015) wrote that many internet-based networks that allow users to communicate with others verbally and visually are referred to as 'social media'. Social media has become an important part of everyone's life in recent years, particularly among adolescents. The research conducted by We Are Social (2021) concluded that by April 2021, there were more than 4,5 billion social media users worldwide. This number went up by 400 million in just a year, almost 10 percent. People on social media account for more than half of the world's population. There are a lot of social media platforms like Facebook, Twitter, Snapchat, Instagram, YouTube, TikTok, and so much more. The usage of this social media sites has emerged as the backbone of present communicating and interacting, since they enable individuals to establish a sense of connecting to one another and alter their lifestyles (Griffiths, 2019).

As previously stated there are a couple billions of social media users and Statista (2023) conducted a research about the most popular social network worldwide for the year 2023. In the first place was Facebook, with 2,958 million active monthly users, second place was YouTube, and third place was WhatsApp with 2,000 million active monthly users. While Instagram was fourth, WeChat was fifth and TikTok was sixth. Another research conducted by Statista (2022) concluded that the daily time spent in social media apps from 2012 to 2022 increased drastically. In 2012 the time spent on the internet was 90 minutes while in 2022 the number rose to 147 minutes daily. It has been noted by Griffiths (2019), that decent percentage of individuals who use social media networking sites are more likely to experience some kind of psychological issues which include addiction, anxiety, loneliness, as well as addiction and Attention Deficit Hyperactivity Disorder, also known as ADHD.

On the one hand, there are several benefits of social media platforms, including communicating and maintaining relationships with friends or colleagues, and family members (Reinikainen et al., 2021). Statista's research about most common worldwide reasons for using social media in 2022 were, firstly keeping in touch with

friends and family, secondly filling spare time, thirdly reading news stories, while the last three reasons on the list were following celebrities or influencers, avoiding missing out on things (FOMO), and lastly supporting and connecting with good causes (Statista, 2023). Social media platforms use, and cellphone usage are closely related, and the latter's portability stimulates compulsive checking behaviors that frequently result to a habit and from what is known also as 'fear of missing out' or as previously mentioned FOMO (Griffiths, 2019). FOMO is the fear of missing out on enjoyable experiences and moments that some individuals have, which causes them to seek out ways to remain in constant contact with their social media platforms (Elhai et al., 2019).

On the other hand, social media does have some negative aspects and disadvantages, as shown in Table 1. Some other disadvantages can occur when the constant use of social media by many individuals can begin to affect other aspects of their daily lives, which can be troublesome and very unsafe, which includes scrolling through social media whilst driving (Griffiths, 2019). Motor coordination tension, anxiety, depression, aggression, obsession with drug use, frustration, impaired decision-making, and continued online use despite multiple disadvantages on both psychological and social health are common characteristics of internet addiction (Akin & Iskender, 2011). Other indications of problematic social media usage (PSMU), they might not be as dangerous as the previous mentioned ones, but are more irritating, such as using your cell phone continuously while attending a movie or play at the cinema or theater or browsing through social media while dining out together with colleagues (Griffiths, 2019).

Table 1. Overview of social media’s effects on mental health (Robinson & Smith, 2023).

Social media	Characteristics
+ Positive aspects	<ul style="list-style-type: none"> • Could offer emotional support during tough times. • Finding new friends / communities • Communicating with family / friends

	<ul style="list-style-type: none"> • Raising awareness on important issues • Outlet for creativity and self-expression
- Negative aspects	<ul style="list-style-type: none"> • Isolation • Self-harm • Anxiety • Depression • Inadequacy about life or appearance • FOMO (fear of missing out) • Cyberbullying
Signs of unhealthy social media use	<ul style="list-style-type: none"> • Spending more time online than with real people • Comparing oneself with others / influencers on social media • Sleep problems • Worsening symptoms of anxiety or depression

Table 1 gives an overview of social media and its effects. On the one hand, social media has some positive aspects for mental health. People can use social media outlets to offer or receive emotional support during difficult times. Users can use it to find new friends, join different communities, or raise awareness on important issues. It plays a big part in communication, either with friends or family. Another characteristic is that it can be used as an outlet for creativity and self-expression. On the other hand, there are also a lot of negative aspects, like feeling lonely. Using social media can cause cyberbullying, which could sometimes lead to self-harm, anxiety, depression, suicidal thoughts, etc. Users could also have a fear of missing out (FOMO). FOMO is a feeling that people get when you have a fear of missing out on certain information or missing out on events. Lastly, the signs that could indicate that social media is starting to impact mental health or of an unhealthy social media usage are when users are spending more time on social media than with real people.

Another one could be when comparing oneself with influencers, celebrities, friends, or other social media users, when it is causing sleeping problems or when anxiety and depression worsen, etc. (Robinson & Smith, 2023).

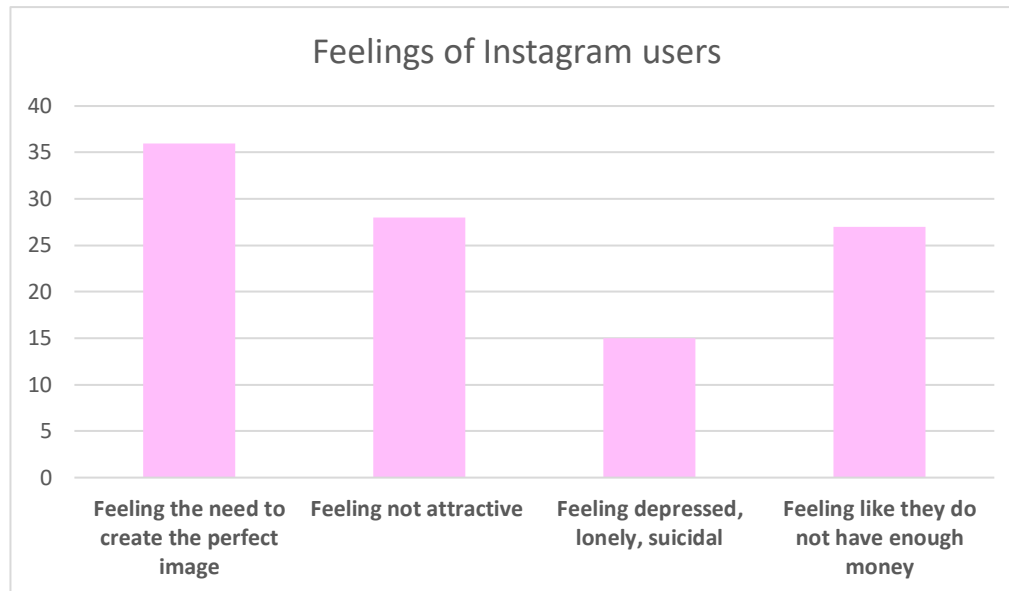


Figure 1. Instagram users' negative feelings about the app (Statista, 2021).

The feelings of Instagram users have been emphasized by different studies, and Figure 1 gives an overview of some of the most common Instagram users' negative feelings that Instagram users reported experience while using the app. The survey was conducted in the United Kingdom in 2019 and consisted of 2,503 respondents in the ages between 13 and 17. First, 51 percent of teens said that after using the Instagram app, they felt like they had to create the perfect image. Secondly, 43 percent of adolescents thought they were not attractive. Thirdly, 27 percent of people had negative emotions, like feeling depressed, lonely, and suicidal. Lastly, 42 percent of people felt like they did not have enough money. According to these specifics, Instagram users have the highest feeling of creating a perfect image, and after that, the feeling of being unattractive. Not only can they start to feel bad about themselves because of what they see, but it can also be because of other people that are making them feel bad (Statista, 2021).

2.2 Mental health and social media use

The section below reviews the literature related to mental health and social media usage. The American Psychological Association (APA, 2023) explains mental health as “a state of mind characterized by emotional well-being, good behavioral adjustment, relative freedom from anxiety and disabling symptoms, and a capacity to establish constructive relationships and cope with the ordinary demands and stresses of life”. Whereas the World Health Organization (WHO, 2017, p. 1) states that “mental health conditions are increasing worldwide”. The transitional period from childhood to becoming an adult also known as adolescence. It is a complicated in critical stage where different mental problems arise, not only damaging their academic performances and relationships, but also increase the risk of major issues in adulthood, including unemployment, drug addiction and criminality (Yang et al., 2021). Many mental health issues could affect anybody. The most widespread mental health issues are anxiety and depression (WHO, 2022). Nonetheless, other mental health problems are eating disorders, personality disorders, post-traumatic stress disorders (PTSD), etc. Many symptoms could be referred toward being mental health disorders, although the majority of research focuses on particular domains, such as depression or satisfaction with life, or on a number of symptoms that are known as internalizing problems or externalizing (Beeres et al., 2021).

A multitude of factors determines mental health. The larger the number of risk factors that teenagers are exposed to, the more negative effects on their mental health issues are likely to occur. Exposure to adversity, peer influences or peer pressure, and identity discovery are all factors that can contribute to stress (WHO, 2021). Furthermore, social media offers youngsters different opportunities to start engaging in riskier behaviour, join different sketchy communities and socialize with strangers online without parental supervision (Valkenburg et al., 2022). The quality of their family situation and their interactions with their friends are also crucial influences. Mental health is harmed by violence, particularly sexual violence and bullying, childhood trauma from harsh parenting, and severe socioeconomic difficulties (WHO, 2021). Research has also established a connection between mental health and sleep, as adolescent people frequently sleep next to their phones.

Furthermore, it means that a prolonged use of social media may shorten the amount of time spent sleeping (Kelly et al., 2018).

As indicated previously, psychologists and educators are aware of the drawbacks of using the social media and the internet, particularly the overuse and abuse of it as well as the resulting physical and mental issues that can result in addiction (Akin & Iskender, 2011). Social media use can negatively affect adolescents' mental health because social media has a reinforcing nature. While using social media, brains release dopamine. It is designed to get people addicted. Due of the dopamine-related effects of TikTok, certain users may experience problematic use, and in some instances, addiction to the app. As well as, many harmful effects, such as disturbed sleep, neglected hygiene, social isolation, etc. (Adair, 2022). There is, of course, some of the population that is not affected by social media's addictiveness. A 2018 British study highlights the potential pitfalls of prolonged social media use for young people's mental health. The study tied social media use to decreased, disrupted, and delayed sleep, associated with depression, memory loss, and poor academic performance (Kelly et al., 2018). Beeres et al. (2021) conducted a research paper where it was concluded that youngsters who use social media more are reported to have more symptoms of different mental health problems, but there is no concrete evidence for a longitudinal connection between increased use of social media and mental health problems. In a study about what percentage of people agree that using social media relates to feeling lonely or being socially isolated, 24 percent of participants answered that they completely agree, 44 percent of adults somewhat agreed that it is somewhat reacted, 16 percent of people somewhat agreed, 6 percent completely disagreed and lastly, 10 percent were unsure (Statista, 2021). Overall, this shows that social media might serve as an indicator rather than a risk factor for mental health problems. According to Valkenburg et al. (2022), the fast growth of social media networks mental health problems might be related to two factors. First, social media use is becoming a more important part of youngsters' everyday life, yet they do not willingly accept their parents' control over their social media usage. Secondly, adolescence is the time in life when happiness varies the most, when risk-taking is at its highest, and when mental problems, such as depression, are the most typical. In a study conducted by Statista in United Kingdom about what kind of an impact social media has on youngsters, it was discovered that

YouTube is considered as a positive social media network, as it was concluded that it has a 'net positive' impact. On the other hand, Instagram was discovered to be the platform with the biggest number of negative effects on adolescents' mental health. The study was executed on people between the ages of 14 and 24 and 1,479 youngsters were surveyed, while multiple different factors had been taken into consideration such as anxiety, depression, self-image, etc. (Statista, 2019).

The sort of social support that is most closely connected with positive results for mental health is emotional support, which is often attained through intimate connections (Shensa et al., 2020). People are able to receive social support in real life and on social media (Meshi & Ellithorpe, 2021). Shensa et al. (2020) stated that face-to-face contacts have historically been a successful method of gaining emotional support. Yet, the rise of social media has drastically altered how teenagers and young adults communicate. Individuals indulge in virtual connections to minimize face-to-face engagements (Moreau et al., 2015). Social media could also benefit those with mental health problems, as they could seek help online through different forums or chats where they could express their feelings and be anonymous. In addition, they could seek different kinds of support and find a community where they would feel welcome (Naslund et al., 2020).

2.2.1 Anxiety and social media

The following subsection focuses on anxiety, as well as the relationship between anxiety and the usage of social media. Anxiety is "an emotion characterized by apprehension and somatic symptoms of tension in which an individual anticipates impending danger, catastrophe, or misfortune" (APA, 2023). Bodies can also regularly express signs of anxiety, "muscles become tense, breathing is faster, and the heart beats more rapidly" (APA, 2023). Low life satisfaction, illnesses, sleep issues, poor levels of social support, insufficient education, unemployment, and low income were all associated with anxiety. Higher anxiety was also linked to drinking alcohol and smoking cigarettes, particularly in women (Hinz et al., 2017). Elhai et al. (2019) stated that depression and anxiety are linked to excessive smartphone and social media use. Adolescents nowadays have more problems with spending too much time online, that can cause problematic social media usage. Problematic social media usage, sometimes referred to as PSMU (Wang et al., 2022).

In addition, Valkenburg et al. (2022) defined SMU as the active or passive, for example posting on social media or only browsing online. Another way to define it is private, meaning posting one to one or public, meaning posting one to many on different social media channels (like Instagram, Facebook, Snapchat). While Wang et al. (2022) described PSMU as excessive social networking compromises, enhanced urges to use social media overtime, disregarding academic and or working activities, stressed personal relations, failure to reduce or stop the usage, tenseness, or irritability if unable to connect online, and lying about the duration of usage. Problematic SMU is defined by a constant obsession with social media, an unwillingness to quit using it, and a persistent disregard for one's health such as lack of sleep, and other significant areas of one's life for example family, friends, and other assignments (Valkenburg et al., 2022). The users' private, social, and or work life might suffer as a result of negative impacts brought on by their extensive usage of social media (Bányai et al., 2017). The development of addictive behaviors in people may be significantly impacted by signs of problematic social media use (Wang et al., 2022). As previously explained FOMO is also in positive correlation to PSMU, as well FOMO is positively correlated to anxiety. Moreover, the relationship involving anxiety and PSMU severity was driven by higher FOMO (Elhat et al., 2019). FOMO or the dread of losing out on fresh information and incoming notifications during the night may prevent youngsters from getting enough sleep (Kelly et al., 2018). Stress, anxiety, and sadness were also all positively correlated with one another (Sha & Dong, 2021). Moreau et al. (2015) noted that those with social anxiety are more prone to relate to other people online, and to create online relationships.

The World Health Organization (2022) stated that in the year 2019 every eight person lives with some kind of a mental disorder, anxiety and depression being the most common. In the next year 2020 the number of people living with a mental disorder rose significantly, mostly because of the Corona pandemic. The number of people with mental disorders increased by approximately 28 percent. In the United States the number of people suffering from different anxiety disorders in 1990 was approximately seven percent for females and approximately four percent for males. The number was growing steadily until 2000 when it reached 9.21 percent for women and 5.26 percent for men, after that the number of people suffering from

anxiety was decreasing and in 2017 it started growing again. In 2019 it reached 7.67 percent for females and 4.57 percent for males (Statista, 2022). Another study by Statista (2022) discovered that in 2021 31 percent of college students in United States had some kind of an anxiety disorder, while 27 percent of college students had depression or some other kind of a mood disorder. Anxiety and problematic smartphone use show a downward spiral, for the particular reason that anxiety induces problematic phone use, in addition to problematic smartphone use causing anxiety (Elhat et al., 2019). As well, pessimism, bad physical quality of life and daytime tiredness were all linked to anxiety (Hinz et al., 2017). Levels of anxiety and fear brought on by encounters with online bullying may also have an effect on both the amount of sleep and quality (Kelly et al., 2018).

Social media continues to affect teens in a variety of ways. In addition, problematic internet and Facebook users experience social anxiety more commonly than non-problematic consumers (Moreau et al., 2015). One of the issues is that adolescents forget how to connect and communicate with their friends and colleagues since they spend so much time online and spend more time solely engaging via social media platforms. It is important to note that Meshi & Ellithorpe's (2021, p. 1) study showed that "real-life social support was then associated with reduced depression, anxiety, and social isolation". Other studies also support this finding, as Keles et al. (2019) mentioned when compared to people with good social support from either friends, family, or others, those people with poor social support are much more likely to suffer from mental health problems, like anxiety, depression, psychological distress, etc. Furthermore, in a chaotic, conflict-ridden, and inadequate home environment, young people's challenges in getting some help and their inability to articulate their emotions could make their mental health issues especially worse (Yang et al., 2021).

Additionally, many mental health consequences for teenagers who use social media extensively have been connected to it. Some of the consequences include decreased or increased self-esteem, decreased, or improved social network, decreased loneliness, and increased symptoms of anxiety and depression (Beeres et al., 2021). However, Shensa et al. (2020) wrote that social media usage has been linked to poorer face-to-face emotional support and higher levels of social isolation, anxiety, and depressed mood. This is despite the possibility that social media use among

young people will provide possibilities for connection and emotional support. People who are more exposed to unfavorable conditions such as poverty, violence, handicap and inequality are at a higher risk of having some kind of a mental health condition. Likewise, individual psychological and biological characteristics, such as emotional skill and genetics are factors that assist in inducing mental health problems (WHO, 2022). Yang et al. (2021) stated that family dynamics may be a significant component to the mental well-being of adolescents. The frequency of mental health issues among teenagers may be decreased by educational and family-focused treatments. Many symptoms might be referred to be mental health disorders, although the majority of research focuses on certain areas, such as depression or satisfaction with life, or on a group of symptoms known as internalizing and or externalizing problems (Beeres et al., 2021). Teenagers who spend more time on social media may be more likely to internalize their issues (Riehm et al., 2019). Symptoms of depression and anxiety are prevalent internalizing issues in adolescence, but lack of attention and hyperactivity are indicators of externalizing issues (Beeres et al., 2021).

A study focusing on users' reactions to harmful effects of online contacts reveal that after engaging in negative online communication, around a third of the female respondents, indicated that they had stopped speaking what they were thinking online (Statista, 2022). More female social media users experience harmful consequences because of their online interactions. A reason for that could be that women and men often have different perspectives on emotional support (Shensa et al., 2020). Moreover, also since Bányai et al. (2017) indicated that problematic social media use is more common among adolescent female users rather than adolescent male users. Likewise, Sha & Dong (2021) as well stated that in general, anxiety and depression are more common in young women than in young men. The greatest occurrences of depression as well as anxiety are found in adolescents. Supporting these notions, a study conducted worldwide suggested that during the Covid-19 pandemic in 2020, 51.1 millions of women experience some kind of an anxiety disorder, while only 24.4 millions of men experienced them (Statista, 2022). Wang et. al. (2022) wrote that the level of negative social media use varies by gender. In another study that was also confirmed, as it stated that nearly a quarter of females said that because of abusive online communication, they had reduced the

amount of their internet usage. Internet users have described having panic attacks, being anxious, and significantly lowering self-esteem as some of the most significant consequences of coming into touch with negative content online (Statista, 2022). If females are more prone to having bad experiences online that can easily lead to eating disorders especially since the content on TikTok can lead to that according to Adair (2022). This kind of behaviour can occur because girls (and boys) can be easily influenced with videos such as “What I eat in a day on a calorie deficit of 1290” (O’Gorman, 2022) which promotes an inappropriate relationship with food and present eating disorders as lifestyle decisions rather than serious mental diseases by normalizing negative body image which can result in anorexia nervosa and or bulimia nervosa (Adair, 2022).

2.2.2 Depression and social media

The usage of mobile technologies and social media has significantly increased. Since the 1990s the usage has increased greatly, the adolescents nowadays are considered as digital natives, for the particular reason that they are exposed to different mobile devices and technologies (for example, cell phones, tablets, computers, etc.) from birth (Arias-de la Torre et al., 2020). Depression is, to the American Psychological Association (APA, 2023), defined as “a negative affective state, ranging from unhappiness and discontent to an extreme feeling of sadness, pessimism, and despondency, that interferes with daily life”. Not only can social media make people feel anxious, but it can also make people feel depressed (Arias-de la Torre et al., 2020). As Wang et al. (2022) has noted that depression and anxiety are typically present at the same time, which may worsen the symptoms and associated complications. Research conducted by Meshi & Ellithorpe (2021), which was investigating time being spent on social media, social media usage established that there is a causal relationship between using social media networks and depressive symptoms. Furthermore, it concluded that spending more time on social media either causes or contributes to greater depression symptoms or decreased emotional well-being. There is increased interest in the relationship between social media usage (SMU) and mental well-being, despite the fact that there are many variables that contribute to depression (Primack et al., 2021). Social media usage also shortened as SMU, and defined as a collection of web-based programs that

enable the exchange of user-generated content (Kaplan & Haenlein, 2010, cited in Primack et al., 2021). The use of mobile technologies and social media (MTSM) may also encourage unhealthy behaviors, such as impulsive behavior, aggressiveness, depression, and particular harmful behaviors like cyberbullying, stalking, or sexting that are a result of using these technologies (Arias-de la Torre et al., 2020).

One of the most common mental illnesses in the world is depression, it causes enormous dependency and financial pressure on health systems (Arias-de la Torre et al., 2020). Depressive disorders are a prevalent illness that cause significant misery and functional damage. In terms of disability-adjusted life years between the years 1990 and 2010, major depressive disorder ranked 11th in the world, with a growth of 37 percent. This indicates that major depressive disorder is responsible for a significant portion of the global illness burden (McDougall et al., 2016). Arias-de la Torre et al. (2020) highlighted that depressive symptomatology may emerge during adolescence in varying ways than the normal depressive behaviors, such as irritability, anger, avoidance, or even other behavioral patterns. The yearly economic cost of depression in the United States alone is more than \$200 billion due to decreased labor productivity, higher hospital expenses, and suicide (Primack et al., 2021). Furthermore, in the past 20 years, there has been a substantial rise in the number of youth suicide deaths and attempts as well as the incidence of serious depression and symptoms of depression among young people in the United States (Riehm et al., 2019). According to Adair (2022) a decade long study revealed that adolescent females that have started using social networks for at a minimum two to three hours per day and then significantly expanded their use of social media over the course of the study had a greater tendency to commit suicide as adults.

In the last 25 years, it was seen that adolescents are experiencing an approximately 70 percent increase in the prevalence of having anxiety and as well depression (Royal Society for Public Health & Young Health Movement, 2017). Because of the high increase, depression was recently identified as the primary global reason for disability, causing more disability-adjusted years of life than any other category of mental disorders (Primack et al., 2021). A study conducted worldwide in 2020 about the major depressive disorder in people during the Covid-19 pandemic concluded that 35.5 millions of females experienced major depressive disorder, and 17.7

millions of men (Statista, 2022). Not only is anxiety the most common health concern among females, but depression is also more common among females. The research conducted by Kelly et al. (2018) stated that for adolescent females compared to adolescent males, there was a stronger correlation between social media use and depressed symptoms. The intensity of depression also relates to the daily usage of social media networks, not including the differences in the gender. The research done by Wang et al. (2022) concluded that University students' experiences with anxiety and depression vary depending on the individual's gender. A notable progressive increase in the percentage of young women with clinically significant symptoms and depression symptom scores across the span of daily social media use, from zero to five or more hours. While regarding young males, those reporting three or more hours of daily usage had higher marks for depressed symptoms (Kelly et al., 2018).

Adolescence is a period of time when depression is much more likely to develop, and especially with teenagers who already have mental health issues are more likely to experience even poorer mental health in the future (Kelly et al., 2018). It has been also noted that self-harming among young girls has increased, rising about 68 percent between 2011 and 2014. In early adolescence, females report depressive symptoms more frequently than boys in terms of biological sex between 25 percent–40 percent of teenage girls show higher levels of depression in comparison to 20–35 percent of teenage boys (Coyne et al., 2020). Suicide is the most tragic occurrence, and there have been several instances where it has happened. Yet fortunately, such occurrences are few (McCrae, 2019).

As previously stated depression is a rising problem. Statista (2019) conducted research in the United States, among adolescents aged 12 to 17 years-old, from 2006 until 2018 the teenagers who are expressing depression almost doubled (7.9 percent to 14.4 percent). From the 14.4 percent of adolescents, who were experiencing depression, less than half of them received treatment (only six percent) (Statista, 2019). In a study conducted by Statista (2023) they established that 18 percent of respondents think that social media is completely responsible for the increased depression among adolescent Americans, whereas 33 percent think that it is mostly responsible, whilst 35 percent answered somewhat responsible, while only

two percent answered that social media is not at all responsible and 4 percent that social media is not very responsible.

All the impact of how social media affects mental health may differ between different individuals, especially those who engage in downward social comparison, meaning that they compare themselves to lower performers in contrast with those individuals who compare themselves to higher performers (Keles et al., 2019). The severity of depression, anxiety, or stress increases in proportion towards how problematic Internet usage is (Sha & Dong, 2021). Furthermore, there can be other factors that connect social media to depressive symptoms. For example, poor sleep, cyberbullying, negative body image, and negative and or low self-esteem seem to be significant factors that link the usage of social media among youngsters to depression symptoms (Kelly et al., 2018). Additionally, the family dynamic and parental involvement can have a substantial impact on mental health issues including anxiety, alcoholism, and depressive symptoms (Yang et al., 2021). According to a study by Meshi & Ellithorpe (2021) social support in person and online is related to fewer depression-related behaviors and emotions. However, some social media platforms do not effort to help with fewer depressive symptoms. For example, studies showed that while receiving more emotional social support on Facebook is connected with much more depressive symptoms, while receiving social support in person is associated with fewer depression levels (McCloskey et al., 2015; Shensa et al., 2020, cited in Meshi & Ellithorpe, 2021).

To investigate the importance of mental health and social media usage, the following hypothesis was formed:

H1: There is a relationship between social media usage and adolescents' mental health.

2.3. Cyberbullying and mental health

The following chapter focuses on cyberbullying and mental health. People may be exposed to bullying as their time on social media increases. The bullying that occurs online is called cyberbullying. Cyberbullying is a newer form of bullying and harassment that has lately developed (Slonje & Smith, 2008). The American

Psychological Association (APA, 2023) definition of cyberbullying is “Cyberbullying is verbally threatening or harassing behavior conducted through such electronic technology as cell phones, email, and text messaging”. In addition, Sabella et al. (2013, p. 1) defined cyberbullying as “bullying perpetrated through online technology”. “Cyberbullying is a significant public health concern that can lead to increased risk of mental health issues, including psychological and developmental problems or suicide” (Garett et al., 2016, p. 1). Garett et al. (2016, p. 1) associated cyberbullying “with face-to-face confrontations, concern about going to school, and physical altercations”. In contrast, bullying is the recurrent use of violent behavior or purposeful harm-doing by colleagues and is described as an imbalance of power seen between the bully and the victim, whether that power imbalance is real or believed to be there (Wolke & Lereya, 2015). Considering that cyberbullying is a new, modern phenomenon, researchers lack clarity on the description and occurrence of the phenomenon and techniques for assessing it.

Furthermore, there are different types of cyberbullying which can occur by text message, email, phone calls, pictures, video clips, etc. (Slonje & Smith, 2008). When someone tries to disturb and hurt an individual through technology such as a smartphone, text message, webpages (such as Facebook and Twitter), or email, it is known as cyberbullying (Wolke & Lereya, 2015). Cyberbullying is becoming a significant public health concern that leads to mental and behavioral problems or issues and increases the risk of suicide (Garett et al., 2016). Teenagers who experience cyberbullying report more severe depression symptoms, anxiety, loneliness, and emotional illnesses (Nixon, 2014). Online bullying abusers and victims were much more susceptible to developing depressive symptoms in the future (Zhang et al., 2020). Some examples of cyber bullying include having their private emails or text messages sent to another person or posting them for other people to see as well as spreading Internet rumors, getting aggressive or argumentative texts and or emails, and posting humiliating images of them online without their consent (Wolke & Lereya, 2015).

The issue of cyberbullying has attracted a lot of attention from the wider population due to the fast growth of social media platforms on the internet (Elgar et al., 2014). Kowalski & Limper (2015) have argued that that cyberbullying is just classic -

traditional bullying but by using modern technology. While Wolke & Lereya (2013), described it as a as any bullying that takes place online or via the use of a mobile device. As well the researchers pointed out that, although they may have some similar characteristics, cyberbullying and conventional bullying are fundamentally different phenomena committed by slightly different groups of people. Examples include the opportunity for anonymity and the inability to observe the offender and victim. When comparing traditional, bullying, and cyberbullying, it has been observed that adolescence that were victims of traditional bullying, were also more likely to be victims of cyberbullying (Raskauskas & Stoltz, 2007, cited in Kowalski & Limper, 2013). The individuals who were bullied online reported having fewer friends, more issues with their emotions and relationships with peers, a reduced feeling of connection to school, and greater empathy (Nixon, 2014).

As was mentioned before as adolescents' access to the internet and usage of social media is becoming more and more common, but because of that it also increases their chances of being both the victims and the perpetrators of cyberbullying (Zhang et al., 2020). Nixon (2014) mentioned research that concluded that 32 percent of cyberbullying victims have to have at least one stress symptom, for this instance cyberbullying is thought of as a stressor. Stressors can be yet another, devastating incident, or transitioning times (like the beginning of puberty), which can increase depressive symptoms (Coyne et al., 2020). A survey study conducted by Patchin (2019) discovered that approximately 37 percent of students from their sample reported experiencing some cyberbullying in their life. In addition, 24.9 percent of these adolescents experienced mean or hurtful comments, and 22.2 percent experienced spreading rumors online. It was also discovered that teenage girls are more prevalent to experiencing cyberbullying in their lives (Patchin, 2019). While males had a greater probability than females to participate in cyberbullying both perpetrating it and being the victim of it (Zhang et al., 2020). While in a different study conducted by Kowalski & Limper (2013) adolescent girls were more likely than adolescent males to report both being cyberbullied and being the victim of that as well. Comparing male and female victims, young women experience 38.7 percent, while young males only experience it 34.5 percent of the time (Patchin, 2019). In a study carried out by Garrett et al. (2016) it was concluded that almost all students in the ages between 12 and 18 in the United States reported that they have

endured some kind of cyberbullying at least twice in the year 2016. The problem becomes when bullies think that their bullying was not very severe and did not affect their victims very much (Nixon, 2014).

Turning now to Slonje & Smith (2008) who found that victims of cyberbullying rarely tell someone about being bullied, if they do they confine their friends, as well it was discovered that not many adults or parents are aware of the bullying. Peer support as opposed to mother support was shown to moderate the relationship between victimization and symptoms of anxiety and depression (Holt & Espelage, 2007, cited in Elgar et al., 2014). Contrarily, another research discovered that teenage female victims who had more social support from their parents experienced fewer internalizing symptoms (such as anxiousness and depression) (Davidson & Demaray, 2007, cited in Elgar et al., 2014). The most prevalent type of harassment children experience is peer bullying, which is significantly more common than abuse by their families or other adult offenders (Wolke & Lereya, 2015).

Furthermore, Garrett et al. (2016) stated that bullied or cyberbullied children are more prone to experiencing different symptoms of mental health disorders, for example depression, anxiety, changes in sleeping patterns and or eating habits, an increased feeling of loneliness, and losing an interest in activities they once enjoyed. Selkie et al. (2016) wrote that cyberbullying has been also linked victims of this kind of bullying to substance abuse and having somatic symptoms. Another study conducted by Reed et al. (2015) also argued that there is a positive correlation between cyberbullying and having signs of depressions. Furthermore Garrett et al. (2016) stated that victims of any kind of bullying could show signs of self-harming behaviour, suicidal thought and or acts. As well as their school achievements might decrease, like their GPA score they might miss, skip, or even drop out of school (StopBullying.gov, 2021). It has been documented by Zhang et al. (2020) that cyberbullying encounters, both perpetration and victimization, are linked to negative effects including behavioral, physical, and psychological issues is noteworthy. Furthermore, the victims can experience the appearance of physical symptoms, depressed mood disorders, loneliness, anxiety, sadness, and suicidal thoughts (Nixon, 2014). A study by Kowalski & Limper (2013) discovered that the children who had been bullied were more likely to have poor appetite, weariness, bedwetting,

headaches, stress, and stomach pain than their non-bullied classmates. In contrast, there are some extreme cases where some children might go to an extreme with violence, for example in the 1990s out of 15 shooting cases, 12 of the shooters had a history of being bullied in school (StopBullying.gov, 2021). As well as Nixon (2014) mentioned that adolescents who are being cyberbullied are almost twice as likely to try and attempt suicide, more precisely 1.9 times. As well, it was mentioned that suicidal tendencies and cyber harassment have a positive correlation.

Parent monitoring and oversight of both traditional bullying and cyberbullying is an issue, it is believed that adult monitoring and supervision of adolescents' online activities is extremely insufficient (Selkie et al., 2016). Nixon (2014) argued that in order to effectively combat cyberbullying, health care professionals, educators, and concerned adults must offer teenagers with healthy and appropriate coping mechanisms. In reference to Wolke & Lereya (2015), health professionals have largely overlooked peer bullying, despite the fact that it is a serious risk factor and a concern for safety. This could be another reason for Selkie et al. (2016) to believe that cyberbullying might be causing much more harm in a subtle way than the traditional form of bullying. And according to Zhang et al. (2020) depression and cyberbullying both perpetration and victimization are strongly related.

2.4. Body image and mental health

The sections below provides a brief overview of body image and its connection to mental health. Body image is defined by the American Psychological Association (APA, 2023) as “the mental picture one forms of one’s body as a whole, including its physical characteristics and one’s attitudes toward these characteristics”. Body image is composed of individuals’ thoughts and feelings about their body. Fardouly & Vartanian (2016) wrote that the definitions of ‘body image’ in the past have included desire for thinness and muscularity, self-objectification, and body dissatisfaction. Body image may swing from positive to negative emotions, and one individual will feel positive, negative, or a mix of the two at different times.

In addition, Tiggemann (2022, p. 1) claimed that social media is “a potent source of idealized and unrealistic imagery”. A number of different features on social media makes it different from the traditional media, and that can as well contribute to

different effects it has on body image (Fardouly & Vartanian, 2016). Design elements that provide variable benefits, such as 'likes', may encourage excessive social media usage (Farivar et al., 2022). Research suggests that social media use has a small, negative relationship with body image longitudinally (de Valle et al., 2021). As the research by Kelly et al. (2018) indicated that more usage of social media more it is linked to insomnia or bad sleeping in general, which later is related to symptoms of depression. Furthermore, experiencing online bullying or some sort of harassment was in correlation with bad sleeping, low body image and low self-esteem, as well the research specified that adolescent men and women that have bad body image are more likely to suffer from lower self-esteem.

People frequently assess their ideas and abilities by comparing themselves to others. The influence of various social media activities on body image is probably going to differ (de Valle et al., 2021). Adolescents are more likely than younger children and adults to engage in such behavior (Keles et al., 2019). Fardouly & Vartanian's (2016) study showed that using social media, especially Facebook is particularly associated with body image problems among adolescent men and women as well different studies suggest that this connection could only increase over time. Young girls are more likely than young boys to compare themselves with anyone. Young women and girls admit to comparing their looks on social media to both close and distant friends, as well as models, influencers, and celebrities (Tiggemann, 2022).

Another significant aspect of digital networks is that it allows users to connect with new types of 'digital friends,' such as social media influencers, for example, bloggers, YouTubers, Instagram influencers, and TikTok celebrities, who are frequently regarded as close friends or sometimes even family members by their audiences (Reinikainen et al., 2021). Geysler (2022) defined influencers as someone who can influence people's purchasing decisions because of their authority, expertise, status, knowledge, or relationship with their audience. "As influencers endeavor to engage followers and increase their power of influence for commercial value, it can result in potential negative consequences to followers' wellbeing" (Farivar et al., 2022, p.1). This most commonly happens with girls, as they are fascinated with the pictures they post, their looks, their lifestyle, etc. Though, with adolescents, their fascination can lead to some consequences. Not only will some of them get fascinated with

them, but they might also start comparing themselves with influencers. That could lead to a decreased body satisfaction (Fardouly et al., 2015).

As indicated previously, online pictures of idealized 'beauty' are widely available, and these images are connected to people's opinions of their bodies and their self-worth, which are linked to bad mental health (Kelly et al., 2018). The capacity to digitally edit or improve images is one specific feature that adds to the false sense of reality on social media (Tiggemann, 2022). There are also social media platform, like Snapchat and, or Instagram, that already have different types of filters, when taking a photo. Social media can have harmful effects on adolescents' body image. Throughout social media platforms, people frequently portray themselves an idealized vision of themselves by adding only the prettiest photos of themselves (which may be altered and or improved) to their profiles and deleting any photos they find to be undesirable and unattractive (Fardouly & Vartanian, 2016). When they look at photoshop images of people / influencers, they might think that they look like that in real life. Yet a lot of the times, that is not the case. Looking at pictures posted online could be more harmful to body image than other activities on social media, with evidence that the exposure to appearance standards in conventional media photos negatively effects body image in both males and females (de Valle et al., 2021). Those exposed to pictures like that tend to feel bad about themselves, as they don't have such perfect-looking skin, or possibly such thin legs, or perhaps such a small waist, etc.

Against this background, the following hypotheses is postulated:

H2: There is a relationship between social media usage and adolescents' body image.

3 Methodology

The methodology is separated into five sections. To begin, section 3.1. study design, provides an overview of the thesis's study design, and the research approach. The following section is 3.2. data collection, which explains how the survey data was obtained. Next, section 3.3. measures, that discusses a clarification of the chosen quantitative research design. Section 3.4. analysis and results, explains and interprets the findings. The final part, section 3.5. ethical considerations, explain the considerations taken in the study.

3.1. Study design

According to Creswell (2014) research designs can be categorized into three types: quantitative, qualitative, and mixed techniques. The most essential step in determining the best approach to apply for the sort of study being conducted is selecting the appropriate methodologies to utilize. Employing the incorrect one might put a false perspective on the study's theories (Creswell, 2014). "Quantitative research is an approach for testing objective theories by examining the relationship among variables" (Creswell, 2014, p. 4). A qualitative research approach "is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem" (Creswell, 2014, p. 4). Lastly, the mixed method approach "is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks" (Creswell, 2014, p. 4).

For this thesis, the selected design is the quantitative research approach. The motive for using a quantitative research technique was to gain a better understanding of social media and its effects on adolescents' mental health and body image. Also, the quantitative research approach is used to precisely predict the relationship between the suggested variables and the behaved response. The research method for the quantitative thesis is going to be a survey. By examining a sample of the population, survey research offers a quantitative or numerical assessment of the patterns, attitudes, or views of a population (Creswell, 2014). The motive for conducting a survey is that they allow for the collection of vast volumes of data that

can be conveniently examined and processed. The form of data collection is going to be online, meaning the survey is going to be posted online. There are some advantages and disadvantages of doing an online survey. As Sincero (2016) defined, the advantages can be: easier data collection, negligible costs, automation in data input and handling, upsurge in response rates, and flexibility of design, and a disadvantage can be: absence of interviewer, inability to reach challenging people, and survey fraud. A cross-sectional survey design is employed in the current thesis, which means that the data will be gathered at one point in time, and that is going to be easier as we collect larger samples with surveys.

3.2. Data collection

The sample size is 78 respondents, between the ages of 14 and 26. The web survey was conducted in the English language, and it was created through the web page Google Forms. The researcher published the survey in mid-May to have enough time for the data analysis. In order to be able to reject or accept the hypothesis, the survey must be analyzed. The method for gathering survey respondents was online through postings and distribution through various channels, as well it was a type of convenience sampling. The respondents were able to find the survey on different social media channels. For example, on Facebook, it was posted on the Modul University page, as well as posted on the researchers' personal profile to get a different cluster of participants. It was posted on Instagram, as well as on Facebook. Also, a convenience sampling was used, for the reason that the participants of the study are chosen by the researchers from among those who are both easily reachable and readily available. Instead of drawing participants at random from the population of interest, the sample in convenience sampling is chosen based on how easily they can be accessed by the researcher (Creswell, 2014). This way the researcher will get different characteristics of the participants such as their age, nationality, gender, and level of education. The survey was anonymous so that the respondents don't feel the need to answer dishonestly. However, there were questions asking participants for their age, and their gender, as well as their height and weight. These general questions were placed at the end of the questionnaire to hold participants' attention and to prevent laziness and dishonest answers.

3.3. Measures

The survey contains 12 questions, that are based on social media adapted from Fardouly et al. (2015), mental health which were adapted from from Kroencke et al. (2020), and body image adapted from Tiggemann & Slater (2014) and are closed-ended in nature, two questions that will focus on the demographics of the participant, and the question about the participants weight and height. Three primary elements of the survey will include demographics, body image, and mental health questions. In the demographics section, details on the participant's age and gender will be gathered. The questionnaire can be broadly divided into five sections. The first questions of the questionnaire are focused on mental health, asking them about their feelings in the past two weeks. The next part are questions about social media usage, asking the participants how often they use social media platforms. The next part of the questionnaire focuses on body image, asking participants about the perception of their body image. The next part is connected to social media usage and is asking participants about the selected social media networks uses, and the amount of time spent on social media sites, and the last part is going to ask the participants some personal information, like their gender, and their age, as well as their weight and height but the last two questions are optional.

For the questions the Likert scale is going to be used, nevertheless there will be several other methods of questions, for example a single-choice format question with gender choices and an open-ended question asking them about their age, weight and height. The Likert scale was used for questions one through six. The next question is measures on which social media networking sites are most preferred. The questions about social media activity level are measured based on their time spent online and is an open-ended question.

Table 2. Measurement items table

No.	Constructs	Questions	Source
1.		Over the past two weeks, I have felt down, depressed, or	

	<u>Mental Health</u>	hopeless.	(Kroencke et al., 2020)
2.		Over the past two weeks, I have felt nervous, anxious or on edge.	
3.	<u>Social media usage</u>	I spend a lot of time using social media platforms (e.g., Facebook, Instagram, Twitter).	(Fardouly et al., 2015)
4.		I check social media frequently throughout the day.	
5.	<u>Body Image</u>	I feel self-conscious about my appearance most of the time.	(Tiggemann & Slater, 2014)
6.		I often compare my body to others.	
7.	<u>Social media site selection</u>	Which of the following social media platforms do use on a regular basis?	
8.	<u>Social media activity level</u>	How often do you use social media (Facebook, TikTok, Instagram, etc.) per day on average.	
9.		What is your age?	

10.	<u>Demographics</u>	What is your gender?	
11.		What is your height?	
12.	<u>BMI</u>	What is your current weight?	

Table 2 is an overview of the questions consisting of the survey. It is organized into constructs, questions pertaining to particular constructs, and the sources from which the questions were derived. Constructs included in the survey are mental health, social media usage, body image, demographics, and body mass index. Each construct contains two questions.

3.4. Analysis and results

The results of the conducted survey will be reviewed organized and prepared for analysis. The statistical analysis will be conducted with the program called Jamovi. Different calculations will be performed, including mean standard deviations, standard deviations, etc. In addition, several correlations will probably be identified. The analysis aims to find correlations, or no correlations, between negative and positive effects of how social media affects their mental health and between negative and positive effects of how social media affects their body image. The results will also be presented tables.

3.5. Ethical considerations

All survey participants were informed about the aims of the research and were able to voluntarily participate in the questionnaire. All of the participants had to give their informed consent to participate in the study. That was as well insured by giving them the option to withdraw from the study at any time and the writing 'By answering the next question, you are continuing and agreeing to take part in this study' written at the beginning of the questions. Additionally, the researcher respected the privacy of participants' answers and kept them confidential during and after the research. That was as well stated in the introduction part of the survey

‘Note that the participation in this survey is voluntary and anonymous and all the information collected in this survey will be kept confidential during and after the research’. The participants answers were secured by a time code of when the survey was completed, so the researcher was not able to know which participant belongs to which time stamp. Furthermore, it is important to note that no participant was harmed or in any kind of way affected because of the participation in the survey. Before posting the survey online, it is crucial to note that the Institutional Review Board (IRB) at Modul University Vienna reviewed and approved the questionnaire the researcher used for this paper. This approval process was established to ensure that the survey procedures comply with the rules of ethics and that the privacy and well-being of the participants are protected.

4. Results

The results section will elaborate on the analysis that was used in order to obtain the hypothesis results, and to determine the information on the relationship between social media usage and mental health, and social media usage and body image.

Before the start of the analysis the collected data was cleaned. All the undeliberate responses were removed for a more precise calculation. That was done by deleting the responses in which the participants did not agree to participate in the study as well as any responses that were incomplete or any response that had the same answers throughout the whole survey, meaning that the participants were straight lining. Straight lining happens when participants in surveys provide identical or almost the same responses to items within a set of questions utilizing an exact response scale, which could result in less accurate results (Kim et al., 2018).

An evaluation of the participant characteristics was done before the data analysis began. The analysis includes how many hours per day they use social media, their age, gender, the participants' height and weight. Incomplete survey responses were not recorded and were excluded from the data set before the assessment in order to ensure more accurate results.

Table 3: Sample characteristic

Sample characteristics		
N = 78		
Age	Mean	22
Gender	Male	31
	Female	43
	Diverse	4
Height	Mean	173

Weight	Mean	73
BMI	Mean	24,4

Table 3 gives an overview of the sample characteristics of the participants that completed the survey deliberately. While 82 participants completed the survey only 78 participants completed the survey as instructed. The mean age for the participants was 22. The survey was completed by 31 males, 43 females and four divers. That means that 39.7 percentage of participants was male, 55.1 percentage of participants was female, and 5.2 percentage of participants were diverse gender. The mean height for the participants was 173 centimeters, and the mean weight for the participants was 73 kilograms. The mean BMI for the participants was 24.4.

Table 4: Participants usage of social media platforms

Social media platforms	Number of people
Facebook	32
Instagram	64
Twitter	11
TikTok	40
Snapchat	32
YouTube	62
Pinterest	8
LinkedIn	17
Reddit	13

Tumblr	2
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Table 4 illustrates the social media platforms participants use on the daily basis. As seen from the table, 32 people use Facebook. Secondly, Instagram is the most used social media platform from the researchers' participants, as 64 people choose this option. Twitter is used by 11 people on the daily basis. TikTok is used by 40 people and 32 people use Snapchat. YouTube is the second most used social media platform, which is used by 62 people. Next is Pinterest which is only used by eight people on the daily, while LinkedIn is used by 17 people. There was also an option to write other social media platforms that participants use and 13 people wrote that they use Reddit every day. Also, two people wrote another website that they use every day, which is Tumblr and two people wrote this website.

4.1. Reliability Analysis

Table 5 shows the Cronbach's Alpha, mean scores and standard deviation for social media usage, mental health and body image. Cronbach's Alpha was estimated to assess the reliability of each variable. The Cronbach's Alpha results for social media usage and mental health is above 0.7 which suggest that the variable has a satisfactory level of dependability. That indicates that the variable is acceptable and that further computations can be performed on it. The value for body image is 0.57 which is seen as poor but not unacceptable (Schrepp, 2020).

Table 5: Cronbach's α , mean scores and standard deviation for measured constructs

	Cronbach's Alpha	Mean	Standard Deviation
Social Media usage	0.86	3.70	1.08
Mental Health	0.80	3.08	1.19
Body Image	0.57	3.07	1.07

4.2. Hypothesis testing

The analysis starts with testing H1 (There is a relationship between social media usage and adolescents' mental health). Table 6 shows the Spearman's Rho correlation coefficient for hypothesis 1. The purpose of the hypothesis was to determine if there is a correlation between social media usage and mental health. There is no correlation between social media usage and adolescents' mental health. The Spearman's rho correlation coefficient of 0.11 and a p-value of 0.337 does not lead to the acceptance of the alternative hypothesis. Additionally, this result indicates that the data does not provide any evidence of a relationship between the two variables.

Table 6: Spearman's Rho correlation coefficient for H1

		Social media usage
Mental health	Spearman's rho	0.11
	p-value	0.337

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

The analysis proceeded with testing H2 (There is a relationship between social media usage and adolescents' body image). Table 7 shows the Spearman's Rho correlation coefficient for hypotheses 2. The purpose of the hypothesis was to identify if there is a correlation between social media usage and body image. There is no correlation between social media usage and adolescents' body image. The Spearman's rho correlation coefficient of 0.06 and the p-value of 0.619 indicate that there is no correlation between the calculated variables. Furthermore, this indicates that there is no evidence of a relationship between the two variables in the data.

Table 7: Spearman's Rho correlation coefficient for H2

Social media usage		
Body image	Spearman's rho	0.06
	p-value	0.619

4.3. Regression analysis

Table 8 show an overview of the model fit measures. For this analysis the variable 'social media usage' was used as a depended variable while, 'mental health' and 'body image' variables were used as an independent variable. The R value of 0.15 shows that mental health and body image in the model can explain about 15 percent of the difference between the two variables and social media usage. The R-squared indicates that the variables of 'mental health' and 'body image' explain two percent of the variation in the dependent variable 'social media usage'.

Table 8 : Model Fit Measures

Model	R	R²	Adjusted R²	Overall Model Test			
				F	df1	df2	p
1	0.15	0.02	-0.00	0.83	2	73	0.438

Table 9 demonstrates an overview of the model coefficients of both variables of body image and mental health in regard to social media usage. The estimate for the body image is 0.02 and the standard error is 0.12. The p-value for this variable is 0.850, which means that the variable is not significant, and it is suggesting that there is no relationship between social media and body image. The t-value is 0.19. The

standard estimate is 0.02. Based on all of these findings, it appears that there is no link between body image and social media usage. The estimate which is almost zero shows that changes in the body image predictor have little to no effect on social media usage.

With a standard error of 0.11, the value for the indicator Mental Health is 0.13. The value of t is 1.21, and the value of p is 0.232, which again is indicating that there is no relationship between social media usage and mental health. The stand. estimate is 0.14. Based on all these numbers, there is no statistically meaningful link between social media usage and mental health. The estimate 0.14 shows that mental health has an unimportant effect on social media usage.

Table 9: Model Coefficients - Social media usage

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept	6.47	0.91	7.12	< .001	
Body Image	0.02	0.12	0.19	0.850	0.02
Mental Health	0.13	0.11	1.21	0.232	0.14

5. Discussion and Implications

5.1. Theoretical implications

The aim of this research was to assess the relationship between social media usage and mental health problems and the relationship between social media usage and body image concerns. The study was not able to identify any correlation between social media usage and the two proposed variables of mental health problems and body image concerns. That is in contrast with Fardouly & Vartanian (2016) who reported that there is a connection between social media usage and body image problems. As well as it is in dissimilar with McDougall et al. (2016) who stated that the amount of time people spent on social networking sites each day is linked to how depressed they are. Other research also supports a different finding for example, that social media usage causes problems of mental discomfort, such as depression and anxiety in some cases to memory loss (Marino et al., 2018; Sha & Dong, 2021).

The study was not able to identify a correlation between social media usage and mental health. Because of the Spearman's rho correlation, the alternative hypothesis that social media has an effect on adolescents' mental health was not accepted. Therefore, the findings in this study could not support the findings concluded by Kelly et al. (2018) where it was discovered that social media is connected to depression and there was an even greater association for depression in girls rather than boys. The finding was unexpected and could suggest that social media usage does not correlate to mental health problems. As mentioned in the previous section, social media can have several benefits. As Reinikainen et al. (2021) stated that social media is useful for maintaining friendships and keeping in contact with friend and family. This is as well, evident in Robinson & Smith (2023), who indicated that social media is a good outlet for emotional support. The study's results could explain that for the participants involved, social media usage does not cause mental health problems. That could be because the participants' social media usage is not intense. The case study conducted by Beeres et al. (2021) confirms that

the use of social media is not significantly affecting the mental health of people who are pursuing social connections through the internet.

As indicated previously, the study was not able to identify a relationship between social media usage and body image concerns. The Spearman's rho correlation was not significant and hence did not allow to reject the null hypothesis and accept the alternative hypothesis. That is in contrast with Fardouly & Vartanian (2016) which stated that social media does in fact have a high association with body image problems. The same finding was also in a study conducted by de Valle et al. (2021) observed where the primary findings concluded that people watching photographs of the perfect appearance on social media platforms has a negative effect on body image. Kelly et al. (2018) stated a similar conclusion that increased social media usage was associated with online harassment, poor sleep, low self-confidence, and poor body image, all of which were associated with greater depressive symptoms. The study's results might differ from other research since it was not a longitudinal study, as an example de Valle et al. (2021) mentioned that the use of social media at any given moment is associated with a modest decline in body image over the course of time.

The obtained research results deviated from the anticipated outcomes, prompting speculation about the potential causes of these differences. Several factors may have contributed to the divergent results. An example of why the postulated hypothesis deviated from the expected outcomes could be because of the small sample size with people with similar demographics. It is feasible that the sample used in this study had distinctive characteristics that affected the relationship between the investigated variables.

5.2. Limitations and Future Research

There are some limitations connected to the survey. The first limitation is the size of the survey participants. The sample size is only 78, which can raise some concerns as it is a considerably small number. To avoid any bias and to obtain more precise results the sample size should have been bigger. Also, the survey was posted mostly on social media platforms by the researchers. A more even distribution - not only to

the researchers' social group - would have more different responses, which could lead to different results. That is because usually the social groups share similar beliefs, as well it resulted in a smaller number of different ethnicities and religions.

The distribution of the survey to a diverse range of participants, such as different age groups, people with different ethnicities, different religious groups, and other different characteristics of individuals. As well with a bigger sample more valid results and conclusion could be discovered.

Another limitation is the time limitation. The survey was online for only seven days (12.5.2023 – 18.5.2023), nonetheless, leaving the survey online and open to responses for longer was not possible.

For future research, removing time constraints would provide participants with more time for responses, which could lead to changed outcomes and findings. If the research would be a longitudinal study the limitation would be smaller, and the researcher would get stronger evidence to either support or not support the association between social media usage, mental health and body image. Furthermore, longitudinal study would enhance the understanding of the prolonged impacts that social media usage provides to adolescents' and their mental health problems and body image concerns.

Another limitation was the limitation of asking the survey participant to self-report the data, which can sometimes be subjective. The question number eight asked 'How often do you use social media (Facebook, TikTok, Instagram, etc.) per day on average?' which was then answered by respondents by their own judgement. Due to this particular reason these answers could be subjective as they use their own judgement to determine how often they use social media, and sometimes the participants judgement could be clouded. Furthermore, like the study conducted by Kim et al. (2018) stated that straight lining actions of participants are consistent with email and internet-based surveys of self-administration.

For future research the impact of image focused platforms (such as Instagram) should be investigated further since there users are able to compare their bodies or their appearance more (Fardouly & Vartanian, 2016).

6. Conclusion

The section that follows reviews and concludes the literature that has been mentioned in the previous sections. The aim of this study was to investigate the effect that social media has on adolescents' mental health as well as adolescents' body image.

This study's first hypothesis 'There is a relationship between social media usage and adolescents' mental health' was not able to be confirmed. As well the study's second hypothesis 'There is a relationship between social media usage and adolescents' body image' was not able to be confirmed. The research results are surprising especially because if looking at existing research, it can be stated that there are already academic publications that prove that there is a link between mental health, social media, and body image. As Fardouly & Vartanian (2016) defined that there is enough evidence to conclude that social media usage among adolescent girls and boys is connected with body image problems. This is as well, evident in the case of Elhai et al. (2019) where it was stated that anxiety and social media have a positive relationship. Nevertheless, there are some conducted studies that stated that "the link between social media and mental health problems is not straightforward, with various contributory factors" (Keles et al., 2019, p. 2).

Despite the fact that this study did not discover evidence to support the hypothesis, it is essential to recognize that research in this arena is ongoing and complex. Future research may provide additional insights and clarification regarding the connection between social media usage and mental health and the connection between social media usage and adolescents' body image. The findings of this study may shed light on the difficult relationship between social media use and the mental health of young people and inspire strategies to support their positive body image and mental wellness.

Overall, this study aims to contribute to the already existing literature and help close the knowledge gap by the examination of how social media usage affects adolescents. This study contributes to the comprehension of the dynamics of the relationship between social media and mental health, as well as social media and body image.

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Appendices

Appendix 1: Survey Design

Dear participant,

I invite you to take the survey about the relationship between social media, mental health, and body image. The survey is for my bachelor thesis at the Modul University Vienna, the thesis is titled "How does Social media affect adolescents mental health".

Please answer the questions as honest as possible. Note that the participation in this survey is voluntary and anonymous and all the information collected in this survey will be kept confidential during and after the research.

If you have any questions or concerns about this survey, do not hesitate to contact me at 61903968@modul.ac.at.

Thank you in advance.

By answering the next question, you are continuing and agreeing to take part in this study.

1. Over the past two weeks, I have felt down, depressed, or hopeless.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

2. Over the past two weeks, I have felt nervous, anxious, or on edge.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

3. I spend a lot of time using social media platforms (e.g., Facebook, Instagram, Twitter)

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

4. I check social media frequently throughout the day.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

5. I feel self-conscious about my appearance most of the time.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

6. I often compare my body to others.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

7. Which of the following social media platforms do you use on a regular basis?

(Select all that apply)

- Facebook
- Instagram
- Twitter
- TikTok
- Snapchat
- YouTube
- Pinterest
- LinkedIn
- Other _____

8. How often do you use social media (Facebook, TikTok, Instagram, etc.) per day on average?

9. What is your age?

10. What is your gender?

- Male
- Female
- Diverse

11. What is your height? *Optional

12. What is your current weight? *Optional

Thank you for your participation!