

Review of the Association between Social Networks and Adolescent Development

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Abstract. Adolescents are consistently exposed to social networks. Considerable discourse has taken place within both the public sphere and the scientific realm regarding the correlation between social network usage during adolescence and the manifestation of both physical and mental health problems. The main object of this study was to do a thorough and systematic evaluation of the available literature that investigates the association between the well-being of teenagers and their social networks. The review incorporated a total of eleven articles. Adolescents who participate in offline social networks demonstrate an elevated degree of impact on their emotional state and feelings of isolation, although their perception of their physical appearance stays unaltered. Receiving affirmative comments and actively seeking social support can elicit a sense of contentment as well as a sense of isolation. The results from a cumulative total of seven studies continuously indicate a notable correlation between the use of online social networks and several dimensions of mental health, including mood, self-esteem, life satisfaction, body image, and overall subjective well-being. The implementation of intervention tactics and educational activities is of utmost importance in effectively addressing the possible risks to subjective well-being that are linked to online social networks among young persons, educators, and parents.

Keywords: Social networks, adolescent development, well-being, influence.

1. Introduction

The well-being of adolescents is a significant focal point within contemporary culture. In the contemporary era characterized by the proliferation of information, social networking sites have emerged as one of the most extensively utilized online platforms. The global implementation of these technologies has facilitated individuals in establishing, sustaining, and broadening their social connections. The present generation of young individuals is experiencing a pervasive presence of online social media platforms, facilitated by the widespread availability of computers, cellphones, and tablets. The prevalence of these devices among adolescents has rapidly become widespread, prompting significant attention towards the potential effects they might have on the overall welfare of young individuals. Social interactions are posited to be an inherent and essential requirement for human beings, comparable to other fundamental necessities such as the intake of sustenance or the act of sleeping. The undeniable repercussions of social isolation on both physical and mental well-being are accompanied by prospective outcomes that encompass heightened mortality rates. According to the World Health Organization, depression significantly contributes to the incidence of illness among adolescents worldwide, with suicide ranking as the third leading cause of death for persons aged 15 to 19. Self-harm and the diagnosis of mental illness are also becoming more common. In recent discourse, there has emerged a contention positing that the primary factor influencing the probability of experiencing depression is the utilization of social media platforms, rather than the employment of digital devices or overall screen time. This phenomenon holds particular significance for individuals in the adolescent age group, as research indicates that the initial occurrence of a significant depressive episode is most commonly observed during the period of youth and early adulthood. There exists empirical data suggesting that the incidence of depression among teenagers has shown an upward trend in recent cohorts after the widespread use of social media platforms. Therefore, it is imperative to ascertain any potential risk factors throughout this particular phase of life. Conversely, some people have observed that the use of social media may result in adverse outcomes, such as social isolation and feelings of despair. Based on a recent longitudinal cohort

research done on teenagers, it was shown that those who indicated spending more than three hours per day on social media platforms had an increased propensity to express internalizing symptoms during a subsequent evaluation conducted around one year later. Therefore, it is imperative that governmental institutions, academics, and educators collaborate in order to investigate the factors contributing to insufficient well-being, with the aim of improving results for teenagers.

On the contrary, certain research have posited that the utilization of social media during the period of adolescence could potentially result in enhanced self-esteem and an augmented perception of social support. A multitude of comprehensive evaluations and meta-analytic studies have been undertaken in an effort to clarify the conflicting concepts under consideration. The results of a comprehensive literature study suggest that there are both positive and negative associations between the use of social media and the overall well-being of teenagers. Upon analysis, a number of the research examined demonstrated positive outcomes for individuals' overall well-being, including enhancements in self-esteem and social support. A further extensive investigation was undertaken to examine the correlation between online social networking and depression among individuals in both the adult and adolescent populations. The results indicate that the use of social media has both positive and negative implications. A longitudinal study was undertaken to examine the association between various forms of online communication and changes in life satisfaction, face-to-face relationships, and experiences of loneliness. The study was completed at two independent time points. The findings of the study indicated a significant correlation between heightened levels of online communication and an increase in face-to-face interaction, along with a little improvement in overall life satisfaction. However, the analysis did not reveal any statistically significant correlation between online communication and changes in levels of loneliness.

This review aims to augment the investigation of these issues by undertaking a thorough evaluation of the extant literature on social networks and their influence on the developmental processes of teenagers. Additionally, these investigations employ the technique of meta-analysis to examine the documented statistical consequences of this association.

2. Social Network

2.1. Relevant Analysis of Social Networks

The first thing to explain is why to use social networks to analyze the impact on adolescent development. Researchers have been looking for effective approaches to analyze adolescent development for years. For researching the social network settings of adolescent development, social network analysis has been found as an appropriate tool. Social Network Analysis (SNA) has been developed since the 1930s as a method to study social networks. This approach use matrices, mathematical equations, and graph theory to illustrate the interrelationships among persons or nodes inside these networks.

A person's well-being can be positively or negatively affected by many different factors. Thoits has demonstrated a strong correlation between mental health and well-being and support from our social networks. People are not isolated from one another, but rather people are intertwined with those of others. And no matter how strong or fragile our relationships may be, people still stay connected to our families, neighbors, colleagues, and friends. Social network comprises individuals with whom we engage, interact, and recognize across the road. These individuals possess the power to influence our emotions, daily routines, mood, and overall perception of life.

Numerous elements and behaviors have been identified as being capable of spreading across social networks, encompassing obesity, smoking, communicable diseases, and emotional states. Detailed research was done by Christakis and Fowler over a period of 32 years in order to examine smoking patterns across a vast social network. In addition, the researchers undertook a study to examine the effects of obesity in a social network consisting of a collective of 12,067 people [1]. The study conducted by Christakis and Fowler demonstrated that smoking habits are influenced by both close and distant social relationships. Moreover, it has been observed that individuals are more inclined to

cease smoking when they witness their partner, sibling, friend, or coworker engaging in similar behavior [2]. The findings of a thorough study titled "The Impact of Peer Dietary Behaviors and Body Weight on Adolescent Individuals" indicate that adolescents are susceptible to the effect of their peers' eating habits and body weight.

The prevalence of social networking sites among young individuals has raised worries over the potential negative impact on an individual's subjective well-being. In the case of adolescents, this phenomenon is especially evident because to the heightened variability of their emotions, moods, and sensations compared to adults. On the other hand, those who are advanced in age and have accumulated a wealth of life experiences tend to be more prone to encountering difficulties pertaining to self-esteem and body image.

2.2. Definition

In recent years, there has been a notable shift in the mode of communication and interpersonal interaction among individuals on social networking platforms, transitioning from in-person exchanges to virtual exchanges conducted online. Nevertheless, similar to the advent of the telephone, it is important to note that Internet communication should be regarded as a supplementary tool rather than a replacement for in-person interaction. The constraints of geography and physical place no longer restrict personal networks. Offline social networks provide a multitude of benefits, such as cultivating a sense of communal belonging, offering assistance and encouragement, and facilitating the process of social comparison. These benefits can be translated into the digital domain and leveraged by social networking platforms [3].

2.2.1. Offline social network

Networks can be seen as a framework for understanding social systems, with a particular emphasis on the interconnections between the constituent entities within the system [4]. In a face-to-face network, the relationships between individuals inside the network are considered, including familial, neighborly, professional, and peer connections. The advent of social networking platforms has presented challenges in distinguishing between the expansive realms of the digital and physical domains. This review will employ the term "offline" to refer to social networks that involve direct interpersonal interaction, commonly known as "face-to-face" networks. Conversely, the term "online" will be utilized to define social networks that involve the usage of social networking sites.

2.2.2. Online social network

Based on available statistics, it has been observed that youngsters exhibit a proclivity towards utilizing the internet, which can be attributed to their relatively younger age. Over the past decade, social networking has evolved as the prevailing mode of online interaction, embracing a diverse array of approaches. Social media platforms use mobile and web-based technology to provide interactive environments whereby individuals can generate and disseminate information [5]. Social networking sites may be seen as a kind of social media platform that enables individuals to construct semi-public identities and foster interpersonal connections. Users are able to manufacture a public or semi-public identity within a outlined framework, curate a network of connections with other users, and have the ability to examine and navigate their own set of affiliations, as well as those formed by others within the platform.

3. The Influence of Social Networks on Adolescent Development

3.1. The Relationship Between Offline Social Networks and Adolescent Development

This review encompasses four previous studies that have investigated the association between offline social networks and the physical and mental well-being of teenagers. The research investigations examined the association with emotions, as well as the feelings of isolation and body

image. The results of the studies revealed a noteworthy correlation between social networks and mood, including both good and negative emotional states.

According to the findings presented in Table 1, a study conducted by Hamid and Lok in 2000 examined a sample of 542 Chinese adolescents, whose average age was 17 [6]. The study revealed that teenagers experiencing feelings of loneliness exhibit a reduced amount of social network in comparison to their non-lonely counterparts. Adolescents experiencing feelings of isolation encounter a reduced availability of others from whom they can seek emotional support. A further investigation conducted by Hutchinson and Rapee [4] examined the social groupings of female adolescents, specifically focusing on friendship cliques. The study revealed that individuals belonging to 173 social cliques exhibited comparable scores on assessments related to dieting, excessive weight loss, and binge eating. Nevertheless, no statistically significant association was seen between these scores and body image. A research done by Hill et al. shown a noteworthy association between the presence of positive emotional states within social circles and a substantial decrease in the likelihood of acquiring depression, as well as an augmented probability of recovering from the condition [5]. The influence of friends' emotional state has significant significance, as the presence of a substantial number of friends who display a positive demeanor may substantially reduce the likelihood of experiencing recovery from depression within a six-month duration. Eyre and Griffiths discovered a comparable outcome in their study, indicating that there is a positive correlation between the quantity of friends with negative moods and the likelihood of teenagers experiencing a decline in mood. Moreover, the existence of such companions diminishes the likelihood of teenagers encountering an enhancement in their emotional state. This conclusion is substantiated by the study conducted by the authors [7].

Table 1. Offline studies comparing

Number	Reference	Date published	Country	Population	Outcome	Results
1	Eyre, House, Hill & Griffiths	2017	US	N=2194 High School students	Mood	There is a positive correlation between the quantity of friends with negative moods and the likelihood of teenagers experiencing a decline in mood, while conversely, there is a negative correlation between the quantity of such friends and the likelihood of adolescents experiencing an improvement in mood.
2	Hill, Griffiths & House	2015	US	None provided	Mood	The presence of a positive emotional state within a social circle has been found to be strongly correlated with a decreased likelihood of getting depression and an improved probability of recovering from it.
3	Hamid & Lok	2000	China	N=542 Mean age 17 years	Loneliness	Adolescents experiencing feelings of loneliness had a notably reduced network size in comparison to their non-lonely counterparts.
4	Hutchinson & Rapee	2007	Australia	N=1094 100% female 10-14 years old Mean age 12.3 years	Body image	The study found that individuals belonging to 173 friendship cliques exhibited comparable scores on assessments related to dieting, excessive weight loss, and binge eating. However, there was no significant correlation observed between membership in these cliques and body image.

The findings of these investigations indicate a noteworthy association between social networks and the psychological well-being of adolescents, particularly regarding emotional states and

perceptions of social isolation. Nevertheless, there is limited evidence to suggest a correlation between social networks and the body image of teenagers.

3.2. The Relationship between Online Social Networks and Adolescent Development

As conducted on seven prior research that primarily examined the correlation between online social networks and the physical and mental well-being of teenagers. The findings indicate a significant impact on the subjective well-being of teenagers. However, it remains uncertain whether this association is good or negative due to ambiguous data. The study inquiries explored the correlation between many psychological characteristics, such as mood, self-esteem, loneliness, body image, life satisfaction, and overall subjective well-being.

Table 2. Online studies comparing

Number	Reference	Date published	Country	Population	Well being outcome	Exposure	Results
1	Frison, & Egg-ermont	2016(a)	Belgium	N=910 51.9% female Average age 15.4 years	Depressed mood	Facebook	The utilization of Facebook in a passive manner was found to have a beneficial association with the experience of low mood. The findings of the study indicate a favorable correlation between active engagement in Facebook usage and the experience of low mood. The utilization of private activities did not emerge as a substantial indicator of depressive mood.
2	Apaolaza, He & Hartmann	2014	China	N=220 58.6% female 14-19 years Old Mean age 16.71 years	Positive mood	Qzone	The study revealed that the gratifications derived from Qzone had a favorable impact on the emotional well-being of teenagers.
3	Jong & Drummond	2016	Australia	N=28 100% female 12-14 year sold	Self-esteem	Social networking sites	The influence of feedback received from users on other social networking platforms was found to have a significant effect on individuals' self-esteem. The prompt posting of photographs and comments necessitated a

							strong need for prompt feedback.
4	Teppers, Luyckx, Klimstra & Goossens	2014	Belgium	N=256 64% female Mean age 15.88 years	Loneliness	Facebook	The study found that feelings of loneliness in relation to peers were a significant predictor of individuals' reasons for using Facebook. The utilization of Facebook as a means of extending one's social network has been found to enhance social wellbeing.
5	de Vries, Peter, de Graaf & Nikken	2015	The Netherlands	N=604 50.7% female 11-18 years old Mean age 14.7 years	Body image	Social networking sites	The use of social network sites was found to have a positive and substantial association with heightened body dissatisfaction. However, it was observed that body dissatisfaction did not have a predictive effect on the use of social network sites.
6	Dogan	2016	Turkey	N=459 High School students	Life satisfaction	Social networking sites	The use of social networking sites shown a substantial and favorable correlation with levels of pleasure, life satisfaction, and psychological wellness.
7	Kim	2017	Korea	N=2099 12-15 years old	Overall subjective wellbeing	Social networking sites	A robust and adverse correlation exists between engagement in internet activities and self-reported mental health. There exists a negative association between online social networking and self-reported wellbeing.

The extensive use of social networking sites and social media platforms among teenagers has been more prevalent due to the expansion of the Internet in recent years. These platforms serve as popular

means for teenagers to engage in self-presentation, communication, and engagement. Consequently, a growing number of interpersonal interactions among teens now take place inside the online realm. Currently, Facebook and Instagram are the prevailing social networking platforms utilized in foreign nations, but in China, the generally employed social networking sites are Weibo, QQ, and WeChat.

Based on extant research, scholars both domestic and international commonly categorize the use of social networking sites into two distinct forms: active usage and passive use. The latter refers to the predominant mode of utilizing social networking sites, which is more prevalent compared to actively engaging with such platforms. In contrast to active engagement, which facilitates ongoing and enhanced communication through activities like commenting and updating, passive engagement typically involves limited interaction with others. It mostly entails reading and consuming content on social networks to get insights into the lives and experiences of others.

According to the findings presented in Table 2, a study conducted in Belgium examined the phenomenon of peer victimization on Facebook among a sample of 910 adolescents, whose average age was 15.4 years. The results indicate that the receipt of negative online feedback had a relatively minimal effect on the reduction of life satisfaction. The considerable attention garnered by the fear of missing out as a prominent catalyst for passive engagement in social networking is very remarkable. Previous studies have demonstrated that the phenomenon known as the FOMO can have detrimental effects on the physical and emotional well-being of teenagers. Adolescents with a pronounced FOMO tend to have elevated levels of anxiety and despair, alongside compromised sleep quality. Moreover, a research study shown that the phenomenon has a detrimental effect on the perceived value of an individual's current experience and their subsequent motivation to participate in the same task again. Nevertheless, it is worth noting that research has indicated a correlation between stressful life events and the passive utilization of social networking sites among teenagers. According to Leung's research, the occurrence of several stressful life events has been seen to have a diminishing effect on the frequency and intensity of passive use of social networking sites among teenagers [8]. Based on the gathered data, it can be deduced that teenagers experiencing stressful life events tend to decrease their use of passive social networking platforms as a means of mitigating the adverse effects stemming from the positive self-presentation of information by their peers on such platforms.

According to Teppers' research, the utilization of Facebook as a means to broaden one's social network has the potential to enhance an individual's social well-being. In a specific study conducted in Australia, girls from 12 to 14 were found to express a strong preference for receiving rapid feedback in relation to the photographs and comments they uploaded online [9]. A research investigation carried out on a cohort of 459 high school students from Turkey unveiled that the use of social networking platforms had a noteworthy and positive influence on their degrees of happiness, life satisfaction, and psychological well-being [10]. Another aspect of online social networks that had a beneficial effect on people's well-being was the reception of feedback. Research conducted in China analyzed a cohort of 220 adolescents, aged between 14 and 19, with the aim of investigating the influence of obtaining gratifications through the social networking platform Qzone on their positive emotional state [11]. A study conducted in Korea has revealed a discernible association between internet activities and self-reported mental health, encompassing both good and negative aspects.

In conclusion, our review has identified a positive association between the usage of online social networks and the overall well-being of teenagers. Engaging in the pursuit of assistance can provide favorable effects on an individual's emotional well-being, overall contentment with life, and perception of social isolation. However, further research has shown an inverse relationship of internet-based social platforms on individuals' subjective sense of well-being, depressive symptoms, diminished self-worth, negative body perception, and, in specific investigations, a decrease in overall contentment with life. The impact of comments received on online social networks might vary, potentially influencing an individual's well-being either positively or negatively.

3.3. Similarities and Differences between Offline and Online Social Networks

In spite of the presence of several online communities, such as forums and chat groups, that mostly center on a certain topic. Typically, adolescents engage in virtual dialogue with the people they interact with in their physical social circles, specifically, those who are already acquainted with them.

How adolescents interact on the Internet contrasts with their offline social networks. Online social networks typically rely on text, images, and videos, utilizing platforms like Snapchat, Instagram, and YouTube. Online social networks are unique in that they do not rely on physical gestures, facial expressions, or social signals. However, as live streaming and FaceTime have become prevalent, online communication is increasingly resembling face-to-face interaction. Despite this, online interpersonal communication cannot be completely replaced by face-to-face communication.

4. Conclusion

The current body of extensive research has shown a notable association between social networks and the developmental outcomes of teenagers. Considering the fundamental importance of connections for individuals, it is not unexpected that scholarly investigations have revealed the favorable influence on this. On the other hand, there exists substantial empirical research that demonstrates a detrimental correlation between social media ostracism and individual well-being. While online social networks have the potential to benefit individuals' mental well-being, they can also present drawbacks, similar to other valuable aspects of life.

The need of cultivating robust social support and relationships for an individual's physical and mental well-being is generally recognized. It is a common inclination, if not a perpetual necessity, for individuals to establish interpersonal bonds. One potential technique to alleviate sad moods among teenagers who frequently experience low or depressed moods is to enhance their social networks by include individuals who consistently exhibit good moods. Expanding the scope of social connections for those experiencing isolation may prove to be an effective approach in mitigating symptoms of isolation. By facilitating social interactions with unfamiliar individuals, individuals have the opportunity to establish new friendships, leading to increased social engagement and reduced feelings of loneliness. In addition, individuals may have the opportunity to encounter a greater prevalence of favorable conduct and engagement. The available data suggests that the manner in which individuals utilize online social networks might potentially influence their mental well-being. The research have revealed that receiving social support is a good element, however passive usage of social networking sites is one of the characteristics associated with a negative impact on well-being. The latter, in contrast, refers to active utilization, when the user intentionally engages with others through the platforms. Research has established that engaging in social networking platforms for interpersonal communication can have favorable effects on our overall state of being. However, when such engagement is characterized by a passive approach, it can give rise to significant levels of anxiety, mostly stemming from the possible repercussions of engaging in social comparisons and experiencing feelings of envy.

Hence, it is essential to prioritize the protection of adolescents' welfare as they embark on their journey of engaging with online social media platforms, while also providing them with comprehensive knowledge on the factors that might have both advantageous and harmful influences on their physical and mental well-being.

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