Internet Usage and Adolescents' Happiness

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Research in Social Change

INTERNET USAGE AND ADOLESCENTS' HAPPINESS

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Abstract

Adolescence, a phase of 'stress and strain', is a crucial period for building a strong sense of self, personality, social connections, and identity. Happiness is also a critical issue concerning adolescents' development. Adolescents are happy when they are satisfied with their lives and relationships. During the last two decades, the internet has been incorporated into the daily lives of adolescents to such an extent that it has become a magic wand for satisfying their psychological needs and making them happy. The present review seeks to explore the factors of internet usage affecting the happiness of adolescents in order to make recommendations for mindful usage of the internet that would eventually result in a happier adolescent. The review has established that time spent online and the purpose of using the internet are the influential factors of internet usage that impact the happiness of adolescents. It has also been revealed that adolescents use the internet for four main purposes: retrieving information, knowledge, communication, entertainment, and commerce, of which communication predominates. Though there are mixed results regarding the relationship between time spent online, the purpose of its usage, and happiness, as well as a hazy understanding of the relationships that exist between the obtained factors of internet usage, the evidence of the negative effects of prolonged and purposeless internet usage necessitates diplomatic strategy implications by policymakers for its mindful usage in order to promote its positive effects and mitigate the potential harm.

Keywords

internet usage • happiness • well-being • adolescents • teenagers

1. Introduction

The internet has become pervasive among today's youth. It broadens access to information, enables new modes of contact, and acts as a platform for a plethora of online services in varied fields. It has evolved into a vital instrument for communication and social interaction during adolescence, a stage of life marked by increased social sensitivity (Blakemore and Mills 2014). More precisely, during adolescence, boys and girls undergo a series of biological, social, emotional, and cognitive changes that influence their behaviour (Hawkrigde 2018), drawing them closer to technology in order to meet their emerging needs (Borca et al. 2015).

Furthermore, adolescents are among the earliest and most ardent consumers of internet technology (Taylor and Silver 2019). Besides providing youngsters with great intellectual skills, the internet also shapes their perceptions of their identity, relationships, and growth (Turkle 2011), which is critical for their psychosocial development. When it comes to the internet, adolescent users are the most vulnerable since they lack self-control, self-regulation, and cognition (Hoareau, Bagès, and Guerrien 2021). Their time spent on the internet has expanded significantly, especially for gaming, social

networking, messaging, entertainment, education, and above all for addressing psychological needs (More 2012). This has reduced the time for face-to-face interaction. Online socialising doesn't genuinely fulfil an adolescent's social requirements, which can lead to negative effects if they spend too much time online (Shapka 2019). Emerging research links excessive online time to negative health outcomes for adolescents (Santesteban-Echarri et al. 2018), which include insufficient sleep (Li et al. 2017), psychological distress (B. N. Kim, Park, and Park 2017), loneliness (J. Kim, Larose, and Peng 2009), and suicidal ideation (Kwon, Kim, and So 2020; Padmanathan et al. 2018). As a result, the quality of life of these adolescents also declines (Shen and Williams 2011). Thus, the mode of social connection switched from 'offline engagement' to 'online interaction', disrupting genuine social relationships and promoting fake virtual ones, which has had a negative impact on many aspects of adolescents' lives, including their happiness (Lee et al. 2014).

Adolescents' happiness is influenced by a variety of personal factors such as fun time, satisfaction of needs, level of religiosity, and social factors such as spending time with friends and family, supporting others in times of need, and sharing important moments with loved ones (Kaur and Chauhan 2021a). The factors of internet usage determining the happiness of adolescents is

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a subject explored less, particularly in developing countries, despite the fact that adolescents are the primary users of technology.

In this context, exploring the factors of Internet usage and the relationship between these factors and determining the impact of these factors on adolescents' happiness are the objectives of this research. This study aims to answer the following research question: 'What aspects of internet usage affect the happiness of adolescents?' So the present review will provide an overview of Internet usage and happiness. The review also tries to reveal the critical research gaps that must be filled by future scholars.

2. Methods and Search Criteria

The review adhered to Arksey and O'Malley's (2005) guidelines for scoping reviews. Owing to the intricacy of the subject of happiness, scoping research was conducted (Mays, Roberts, and Popay 2001). From 1 January 2001 to 30 September 2021, the search terms 'Internet', 'computer', 'digital technology', 'adolescent', 'youth', 'teen', 'young people', 'happiness', 'well-being', 'wellbeing', and 'subjective

well-being' were used in PubMed, Psych INFO, and Google Scholar. These keywords and Boolean operators were used to restrict the search results. The full-text examination papers were referenced in the manual searches, which resulted in the discovery of further publications. The review was limited to English-language records. Ultimately, 46 papers were included in the review of literature for consideration (Table 1). The selection diagram is depicted in Figure 1.

3. Internet Usage and Happiness: A Literature Review

The internet's rapid spread into key realms of our society over the last several years has aroused interest and concern about how different populations utilise it. While extensive research on internet use has been undertaken, very few studies have evaluated the factors of internet usage in relation to adolescents' happiness. This study was undertaken as happiness fluctuates greatly during adolescence and is most likely to be influenced by external factors (Harter 2012) such as internet use, which is most prevalent during this period of time.

Table 1. Summary of studies discussed in the Review of Literature

Reference	Methodology	Country/sample age range	Main Findings
Anderson, M., and Jiang, J. (2018).	<i>n</i> = 743, Pew research center survey, quantitative	US/13–17 years)	The internet is mostly used for communication via social media, which aids in the establishment of friendships and provides emotional support.
Barker, V. (2009).	<i>n</i> = 734, quantitative	California/minimum 18 years	Participants with high self-esteem use the internet for communicative purposes, whereas those with low self-esteem utilise it for social compensation and identity construction. There are gender variations in how males and females use the internet, with females utilising it for interaction and recreation and males using it for social identity construction and recompense.
Brikjær, Michael and Kaats, Micah (2019)	<i>n</i> = 1,160 + 77,600, Mixed Study, qualitative and quantitative	Five Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden). /14–29 years	Excessive usage of social media has been shown to be detrimental to young people's well-being.
C. Longobardi, M. Settanni, M. A. Fabris, D. Marengo (2020)	<i>n</i> = 345, quantitative	Italy/ 11–16 years	Social media (Instagram) has a negative effect on adolescents' psychological well-being.
Christian Schemer, Philipp K Masur, Stefan Geiß, Philipp Müller, Svenja Schäfer (2021)	<i>n</i> = 4,338, Longitudinal study, quantitative	Germany/16–18 years	The frequency with which people utilise the internet in general and social networking sites in particular is not significantly associated to subjective well-being.
Crowe, N., and Bradford, S. (2006).	three-year field study, data collected from Forums and News group postings, Semi-structured interviews, quantitative	UK/13-18 years	The use of the internet for gaming and entertaining by children and adolescents is important for self-expression and identity formation.
Cummings, J. N., Butler, B., and Kraut, R. (2002).	<i>n</i> = 1,066 email based listservs, survey, quantitative	Pennsylvania/college students	The purpose of utilising the internet is to facilitate interpersonal communication through the exchange of email, chat sessions via instant messaging services, and visits to chat rooms. Among all of them, interpersonal communication is the most important application of the internet for enhancing well-being.
Dr. Fatih Bayraktar and Zübeyit Gün(2007)	<i>n</i> = 686, quantitative	North Cyprus/12–17 years	Adolescents used the internet for entertainment and communication purposes in general. Additionally, excessive time spent on the internet is positively associated with compulsive internet use, which is further correlated with depression.
E Bozzola · 2019	Systemetic Literature Review	adolescents	Excessive time spent on the Internet has a negative effect on psychological well-being.

(Continued)

Table 1. (Continued)

Reference	Methodology	Country/sample age range	Main Findings
Gross et al. (2002)	$n = 130$, quantitative	California/11–13 years	There is a positive correlation between adolescents' use of the internet for social connections with peers and their happiness. Online time was not found to be connected with daily well-being.
Gross, E. F. (2004).	$n = 261$, Daily Reports, quantitative and qualitative	California/13–16 years	There is no correlation between time spent online and well-being.
Hugues Sampasa-Kanyinga and Rosamund F. Lewis. (2015)	$n = 753$, Survey, quantitative	Canada/12–18 years	Over two hours of daily usage of social networking sites is independently connected with poor mental health, significant levels of psychological distress, and suicidal thinking. As a result, adolescents with poor mental health are greater internet users. Thus, time spent on the internet is associated with poor mental health.
Jackson, L. A., Von Eye, A., Barbatsis, G., Biocca, F., Fitzgerald, H. E., & Zhao, Y. (2004)	$n = 117$, Survey, quantitative	US/average age 38.6 years	Internet use has no effect on the psychological well-being or social connectedness, regardless of the time of using internet.
Jean M. Twenge (2019)	$n \geq 1,000$, review of Longitudinal and experimental studies	UK and US/adolescents	Digital media use has a negative correlation with psychological well-being. Additionally, non-users of digital media have a poorer level of well-being than light users.
Kilic, A. F., and Güzeller, C. (2017).	$n = 3,170$, quantitative	Turkey/14–17 years	There are considerable gender disparities in the reasons for using the internet among adolescents in various grades. Duration of using Internet influence purpose of using internet.
Kim, C. (2017)	$n = 178$, online survey, quantitative analysis	Sothorn California	Social media is the most effective method of communication outside of class and is consequently employed as an educational tool.
Kraut, R., and Burke, M. (2015)	Review	US	The use of the internet to communicate with close friends and family members has been shown to improve psychological well-being. through reductions in despair, isolation, and anxiety, as well as improvements in subjective well-being, although chatting with strangers has been shown to be detrimental to well-being.
Liu, D., Baumeister, R. F., Yang, C. C., and Hu, B. (2019)	$n = 1,935$, Meta-analysis	California/15–25 years	1. Online gaming has a damaging effect on one's well-being. 2. Using the Internet for social connection, self-presentation, and amusement has been shown to be associated with increased happiness and well-being.
Lung F-W, Shu B-C, Chiang T-L, Lin S-J (2020)	$n = 1,457$, cohort study, quantitative analysis	Taiwan	There is a negative correlation between time spent on the internet and adolescent happiness. Those who spend more than five hours online during the holidays were at an increased risk of self-harm and are unhappy.
Mathers et al. (2009)	$n = 925$, cross sectional study, quantitative analysis	Australia/13–19 years	Adolescents' time spent on the internet, particularly playing games, is inversely associated with their happiness and well-being.
McDool, E., Powell, P., Roberts, J., and Taylor, K. (2020)	$n = 6,310$, Longitudinal Study, quantitative	England/10–15 years	Internet use is connected with decreased well-being across a variety of sectors. Spending a significant amount of time online (five hours or more) had a significant negative correlation with all areas of wellbeing except friendship.
Mesch (2001)	$n = 927$, Face-to-face survey, quantitative	Israel/13–18 years	Adolescents who are socially isolated spend more time online, and internet use does not supplant other social activities.
Nie, N. H., Hillygus, D. S., and Erbring, L. (2008).	$n = 6,000$, Survey, quantitative analysis	US/18–64 years	Time spent online has an adverse effect on social relationships, and the time of day spent online dictates the sort of relationship that is impacted.
Otsuka Y, Kaneita Y, Itani O, Jike M, Osaki Y, Higuchi S, Kanda H, Kinjo A, Kuwabara Y, Yoshimoto H. (2020)	$n = 64,417$, Survey, quantitative analysis	Japan/12–19 years	Unhappiness was substantially connected with maleness and bad lifestyle practises such as skipping breakfast, having poor sleep quality, and indulging in some problematic internet use. Unhappiness appears to be significantly related to how Japanese adolescents spend their daily lives.
Park, H. (2015)	$n = 72,435$, Survey, quantitative Analysis	Korea	Internet use for non-academic activities between 0 and 1 hour per day has a beneficial influence on adolescents' happiness. Adolescents who do not utilise the internet for non-academic purposes are dissatisfied.
Park, So-Youn, and Yang, So-Nam. (2015)	$n = 72,060$, online survey data, quantitative analysis	North Korea/13–16 years	Lower level of subjective pleasure and a lack of social support are associated with increased internet time.
Rains, S. A., and Young, V. (2009)	$n = 4,081$, meta-analysis	Non-students	Participants who took part in a computer-mediated support group were more likely to have better social support, less despair, and greater happiness.
Ranieri, J., Guerra, F., Martelli, A. <i>et al.</i> (2021)	$n = 113$, quantitative analysis	Italy/18–25 years	More than six hours per day of internet use isn't necessarily linked to mental health issues, and internet use doesn't adversely affect well-being.
Richard H. Hall (2016)	$n = 28$, quantitative analysis	US/18–19 Years	Internet use has a negative correlation with happiness. Using the internet to seek knowledge has a good correlation with happiness. The amount of time spent on the internet for emotive expression has no correlation with happiness.

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Table 1. (Continued)

Reference	Methodology	Country/sample age range	Main Findings
Richard H. Hall (2017)	<i>n</i> = 34, Longitudinal study, Mixed study (quantitative and qualitative)	US/18–19 years	Spending more time on the internet playing online games is associated with unhappiness, whereas spending more time examining facts and accumulating information and spending less time on the internet is associated with happiness.
Richard H. Hall (2018)	<i>n</i> = 34, quantitative analysis	US/18–19 years	Those who spend less time on the internet and refrain from expressing negative feelings on the internet are happier. Those who spend time on the internet researching facts and information are also happy.
Richard H. Hall (2019)	Literature review	Varied populations	According to recent studies, the internet is positively associated with happiness, and the major objective of internet usage is social connection. This link is mediated and moderated by a number of factors.
Shen, C., and Williams, D. (2011)	<i>n</i> = 5,000, survey data from Everquest II, quantitative analysis	US/Average age = 31.6 years	Various activities revealed both time displacement and social enhancement effects. The effects of internet and MMO use were highly reliant on the users' goals, situations, and personal traits. 1. More internet time predicts more loneliness. 2. Meeting strangers online was linked to higher loneliness. Communication with family and friends, both near and far, had a mixed or no effect on psychological well-being. Notably, persons who utilise the internet to obtain knowledge felt less lonely.
Subrahmanyam K, Lin G. (2007)	<i>n</i> = 156, quantitative analysis	Los Angeles/15–18.4 years	In terms of internet use and well-being, the findings indicate that there is no correlation between the total amount of time spent online and time spent on email and well-being. Additionally, time spent is unrelated to perceived parental and close friend support.
Techatassanasoontorn, A. A., and Thaiprasert, N. (2013)	<i>n</i> = 100, Literature review	Thailand/18–22 years	Life satisfaction and well-being of young adults are influenced by positive feelings derived from internet activity.
Thierry Pénard, Nicolas Poussing, Raphaël Suire (2013)	<i>n</i> = 1,332, Luxembourgish data, European Value survey, quantitative analysis	Europe/18–89 years	Internet users report higher levels of happiness than non-users. For adolescents, the association between internet use and happiness is stronger.
Tsai, M. J., and Tsai, C. C. (2010)	<i>n</i> = 936, cluster sampling, quantitative analysis	Taiwan/average age = 14.59 years	The aim and intensity of internet use were found to be significantly different between boys and girls. Boys prefer to use the Internet to gather information, whilst girls prefer to use it for socialising. Additionally, boys used the internet at a considerably higher rate than girls.
Twenge, J. M., Martin, G. N., and Campbell, W. K. (2018)	<i>n</i> = 1.1 million, cross sectional study, quantitative	US/13–18 years	Electronic communication and screens (eg, social media, the internet, texting, and gaming) have a negative impact on adolescents' self-esteem, life satisfaction, and happiness as compared to non-screen activities such as in-person social engagement and sports/exercise.
Twenge, J. M., Martin, G. N., and Spitzberg, B. H. (2018)	<i>n</i> = 1,021,209, Survey, quantitative	US/13-18 Years	On average, adolescents spend 4–6 hours each day using digital media, which includes the internet, texting, and social media.
Valenzuela, S., Park, N., and Kee, K. F. (2009)	<i>n</i> = 2603, Random web survey, quantitative	US	There is a positive correlation between the intensity of Facebook use and students' levels of happiness, social trust, civic engagement, and political participation.
Valkenburg, P. M., and Peter, J. (2007).	<i>n</i> = 800, Survey, quantitative,	Dutch/10–17 Years	Time spent online chatting with friends has been shown to correlate positively with happiness and well-being. Instant messaging positively moderates the relationship between internet usage and well-being of adolescents.
Valkenburg, P. M., and Peter, J. (2009).	literature review	adolescents	The use of the internet has a favourable correlation with social connectivity and well-being.
Van den Eijnden, R. J. J. M., Meerkerk, G. J., Vermulst, A. A., Spijkerman, R., and Engels, R. C. M. E. (2008).	<i>n</i> = 663, Cross-sectional and longitudinal study, quantitative	Netherland/12–15 Years	Depression and net addiction are correlated positively with internet use, but loneliness is adversely correlated with it. The most common use of the internet is instant messaging, followed by entertainment and informational purposes. Addiction and communication go hand in hand
Vilhelmson, B., Thulin, E., and Eildér, E. (2017)	<i>n</i> = 7,366, Survey, cross-sectional data, quantitative analysis	Sweden/15-84 Years	There is a strong correlation between the amount of time spent using ICTs and one's leisure time. Excessive Internet use has a negative impact on outdoor and athletic activities, but does not affect time spent with friends and family.
Wang L, Tao T, Fan C, Gao W (2015)	<i>n</i> = 1,727, quantitative analysis	China/12–25 Years	Online happiness is not correlated with real-world contentment.
Yang-Sook Yoo, PhD, RN, Ok-Hee Cho, PhD, RN, Kyeong-Sook Cha, PhD, RN (2013)	<i>n</i> = 74,980, Survey, quantitative analysis	Korea/12–19 Years	Utilising the internet for more than four hours per day results in suicidal ideation, attempted suicide, a melancholy mood, significant subjective stress, and a lack of or inability to experience happiness.

Figure 1. Flow chart showing selection of studies.

Time spent on the internet includes both regulated hours used for academic purposes, such as educational and informative purposes, and unregulated hours used for non-academic purposes such as entertainment and communication during leisure time (Bayraktar and Gün 2007). Twenge, Martin, and Campbell (2018) have opined that unregulated use of the internet is connected with unhappiness, whereas its regulated use is associated with happiness and well-being. Likewise, adolescents' favourite time for using the internet is during their leisure hours (Twenge, Martin, and Spitzberg 2018), the prolific use of which is considered to be the most important factor for the happiness of adolescents (Kaur and Chauhan 2021b). This involvement is responsible for reducing the time available for sports and recreation (Vilhelmson, Thulin, and Eildér 2017). Adolescents who spend more than five hours on the internet during holidays are at an increased risk of self-harm (Lung et al. 2020), especially if gaming is the purpose of its usage (Mathers et al. 2009), thus preventing the person experiencing happiness (Yoo, Cho, and Cha 2014). Furthermore, adolescents may participate in aggressive online deeds, meetings, or talks with nefarious individuals without proper safeguards (Hoareau, Bagès, and Guerrien 2021). It indicates that unregulated internet usage for communication and entertainment outweighs controlled or regulated internet usage for information or knowledge among the youth, which is responsible for lowering their well-being (Bozzola et al. 2019). Suicidal thoughts in teens are also linked to excessive internet use (Kwon, Kim, and So 2020). Park (2015) asserted that using the internet for less than an hour per day for non-academic purposes had a favourable

effect on teenagers' happiness. On the contrary, not using the internet at all is associated with unhappiness (Pénard et al., 2013; Twenge, 2019). The American Academy of Pediatrics recommends less than two hours a day of internet usage by adolescents (Chassiakos et al. 2016).

One side of the argument claims that everyday usage of the internet for communication purposes makes social ties stronger, thereby reducing the depression, anxiety, and loneliness of the user (Rains and Young 2009) and enhancing their happiness (Gross, Juvonen, and Gable 2002). Furthermore, studies also suggest that internet users are frequently more sociable, both online and offline, than non-users (Shen and Williams 2011). On the other hand, adolescents who lacked social support spent more time online. (S.-Y. Park and Yang 2015). Thus, excessive use of internet does not affect time spent socialising with family and friends or volunteering (Vilhelmson, Thulin, and Eildér 2017). Internet use also encourages teenagers to express themselves and boosts their self-esteem by allowing them to create intimacy with the person with whom they connect, resulting in happiness. (Valkenburg and Peter 2009). Likewise, using online games for entertainment stimulate young people's imaginations by allowing gamers to benefit from opportunities that they may not have in the real world (Crowe and Bradford 2006). But the opposing side of the argument maintains that the excessive usage of the internet increases the chance of coming in contact with inappropriate content, which is a big challenge for teens' happiness and well-being (McDool et al. 2020). Nie et al. (2008) observed that the internet replaces face-to-face engagement with family and friends, which is detrimental to the

well-being of adolescents (Longobardi et al., 2020; Michael and Micah, 2019; Sampasa-Kanyinga and Lewis, 2015). Similarly, the lack of real-life emotional contact may push some adolescents who are more likely to be depressed, unhappy, and socially isolated towards internet addiction (Mesch, 2001; van den Eijnden et al., 2008). Thus, unhappiness is strongly related to internet usage (Otsuka et al. 2020). Accordingly, the negative and the positive aspects (Hall, 2019; Ranieri et al., 2021) of internet usage go hand in hand. Several researches have also shown that there is no association between internet use and happiness (Crowe and Bradford, 2006; Jackson et al., 2004; Subrahmanyam and Lin, 2007). So the relationship between internet usage and happiness is rather complicated. Another factor affecting internet usage patterns is the purpose for using it, which varies from academic activities such as education and information/knowledge searching to non-academic activities such as leisure, entertainment, and connecting socially (C. Kim 2017). It has been found that, for many purposes, the use of the internet for entertainment, commerce, or for finding information is unrelated to happiness, but spending more time communicating, especially with family and friends, brings happiness by lowering depression and loneliness. (Kraut and Burke 2015). In contrast, spending time communicating with strangers, has been linked to a decrease in happiness (Kraut and Burke 2015). Another study conducted by Liu et al. (2019) found that although using the internet for communication purposes is favourably associated with happiness, using it for entertainment purposes adversely affects happiness. Contrary to these findings, some studies propose that using the internet for informational purpose is positively related to happiness (Hall, 2016; Hall, 2017; Hall, 2018) whilst using it for communication purposes decreases happiness (Jackson et al. 2004). Some researchers have shown that face-to-face interaction is more valuable for happiness as compared with online interactions (Cummings, Butler, and Kraut 2002) although others confirm that the intensity of using social media is positively related to life satisfaction (Valenzuela, Park, and Kee 2009). As adolescents grow older, the purpose of using the internet shifts from being educational to being communicative (Kilic and Güzeller 2017). So for the sake of satisfaction adolescents mostly use the internet for social purposes (Barker 2009), which is beneficial in obtaining social support during challenging times (Anderson and Jiang 2018). However, despite our expanding connectivity, we are becoming increasingly isolated (Techatassanasoontorn and Thaiprasert 2013). This may be the case, as it is widely believed that virtual contentment never results in real-world happiness (Wang et al. 2015). Regardless of the purpose, the internet usage is determined by the user's existing values, choices, goals, and presumption, among other factors (De Waal and Schoenbach 2010).

It has been noted that gender predicts the purpose of internet use, with male students preferring to use it for gaming while female students prefer to use it for social interaction (Kilic and Güzeller 2017). According to another view by Tsai and Tsai (2010), male students primarily use the Internet for exploratory purposes, whilst female students use it primarily for communication. Females use the internet for relational purposes, whilst males use it for social compensation and social identification, according to Barker (2009). In another study, Gross (2004) reported no significant difference between the purpose of internet usage by boys and girls, as both prefer to use it for social interaction.

The duration of daily time spent online determines the purpose of internet usage. Students who spend less than an hour on the internet per day use it for educational purpose, while those who spend more than four hours use it for communication purposes (Kilic and Güzeller 2017). Conversely, other studies suggest that daily time spent online has no effect on happiness, but it is only the purpose for using the internet that affects one's happiness (Valkenburg and Peter 2007). So the studies related to internet usage and happiness are quite inconsistent and inconclusive. The reason for this inconsistency is the mistake of considering internet usage as a unidimensional concept, though it is not (Baym, Zhang, and Lin 2004). Moreover, various studies used daily or weekly time spent on the internet as a benchmark for internet usage, which doesn't take into account the different purposes for internet use, such as surfing, online chat, gaming, and so on (Valkenburg and Peter 2007).

Use of the internet has been a blessing for those who are introverted and shy. However, long-term internet use raises concerns about one's health. As a result, the risks of excessive internet use must be taken into consideration, particularly for adolescents who may become regular internet users in the future. Adolescents' well-being can be affected in both positive and negative ways by their participation in various online activities. Owing to a global pandemic that has spread to every country on Earth, internet use has become necessary. Because of the COVID-19 pandemic, teenagers have become even more engrossed in their smartphones, tablets, and laptops, which has resulted in an increase in the risk of addictive behaviour (Duan et al. 2020). Even with increased parental supervision and surveillance, the amount of time teenagers spend on the internet cannot be reduced (Ofcom 2021; Shapka and Law 2013). As a result, adolescent internet use has expanded dramatically. We cannot deny the grim reality that digital technology is here to stay. Since this rising technology is so readily available to adolescents, it is impossible to keep them away from it (Premising and Prajina . P.V, 2012).

4. Critical Analysis of the Reviewed Literature

Whilst research on the use of digital technology and its addiction amongst adolescents has increased over the last two decades, research on the usage of the internet in relation to adolescents' happiness has garnered less empirical attention. Additionally, research on internet usage has concentrated on the media side of it, with scant empirical evidence on the relative influence of non-social media objectives on adolescents' happiness. Although the negative aspects of internet use are emphasised, the positive aspects are overlooked. In light of this, new research efforts are needed to look at the interplay and redundant interactions between components instead of focusing on a single aspect.

Only a few studies used mixed methods, and the sample sizes of most studies were modest, as seen in Table 1. There was a variety of research that examined adolescent internet usage among the articles analysed. Numerous research studies did not employ validated software for quantitative analysis, such as SPSS, or for qualitative analysis, such as NVivo. There is still a dearth of research from developing countries. Apart from China and Thailand, all studies on the influence of internet use on teenagers reviewed here were conducted in developed countries. Nearly 80% of the empirical research examined used quantitative analysis, with 10% using longitudinal studies and only 8.69% using cross-sectional studies. A wide range of techniques and analytical tools are expected to yield productive findings in future research.

5. Conclusion

Many studies have focused on the relationship between adolescent happiness and internet use, particularly social media, in recent years. However, there is still a great deal of research to be done in this area. The purpose of this study was to identify the experimentally confirmed characteristics that influence the happiness of adolescents through internet use. The amount of time spent online and the purpose for which teens use the internet are two of the most important aspects of adolescent happiness on the internet. Adolescents' use of the internet can have a significant impact on their happiness when these two elements are taken into consideration.

According to a review of published studies, adolescents' use of the internet improves their sense of well-being and identity. The majority of research supports the positive effects of internet use on adolescents, such as the ability to express themselves, promote interpersonal communication, participate in leisure activities, and gain access to information. Cross-sectional studies also found a negative correlation between internet use and happiness. This is possibly because cross-sectional research yields false conclusions by restricting inferences to

correlational findings (Kraut and Burke 2015). Some studies have failed to find a link between adolescent happiness and internet use because of small effect sizes or the use of self-reported measurements (Crowe et al., 2021).

The gaps discovered through literature analysis include a dearth of studies in this field from developing countries, a scarcity of studies using a mixed-methods research technique, and studies with a wider age range, which creates issues of representativeness and generalisability of the results. Additionally, internet usage is conceptualised only through the lens of social media, oblivious to other critical goals for its use. Although the literature reviewed indicated that time spent on the internet and the purpose for which it was used were independently related to adolescents' happiness, additional research is needed to determine whether there is a correlation between the purpose for which the internet is used and time spent online, and whether this interaction has an effect on adolescents' happiness.

References

- Anderson, M., and J. Jiang. 2018. 'Teens' Social Media Habits and Experiences | Pew Research Center'. *PEW Research Centre*.
- Arksey, Hilary, and Lisa O'Malley. 2005. 'Scoping Studies: Towards a Methodological Framework'. *International Journal of Social Research Methodology: Theory and Practice*. <https://doi.org/10.1080/1364557032000119616>.
- Barker, Valerie. 2009. 'Older Adolescents' Motivations for Social Network Site Use: The Influence of Gender, Group Identity, and Collective Self-Esteem'. *Cyberpsychology and Behavior*. <https://doi.org/10.1089/cpb.2008.0228>.
- Baym, Nancy K., Yan Bing Zhang, and Mei Chen Lin. 2004. 'Social Interactions across Media: Interpersonal Communication on the Internet, Telephone and Face-to-Face'. *New Media and Society*. <https://doi.org/10.1177/1461444804041438>.
- Bayraktar, Fatih, and Zübeyit Gün. 2007. 'Incidence and Correlates of Internet Usage among Adolescents in North Cyprus'. *Cyberpsychology and Behavior*. <https://doi.org/10.1089/cpb.2006.9969>.
- Blakemore, Sarah Jayne, and Kathryn L. Mills. 2014. 'Is Adolescence a Sensitive Period for Sociocultural Processing?' *Annual Review of Psychology*. <https://doi.org/10.1146/annurev-psych-010213-115202>.
- Borca, Gabriella, Manuela Bina, Peggy S. Keller, Lauren R. Gilbert, and Tatiana Begotti. 2015. 'Internet Use and Developmental Tasks: Adolescents' Point of View'. *Computers in Human Behavior*. <https://doi.org/10.1016/j.chb.2015.05.029>.
- Bozzola, Elena, Giulia Spina, Margherita Ruggiero, Davide Vecchio, Cinthia Caruso, Mauro Bozzola, Anna Maria Staiano, et al. 2019. 'Media Use during Adolescence: The Recommendations of the Italian Pediatric Society'. *Italian Journal of Pediatrics*. <https://doi.org/10.1186/s13052-019-0725-8>.

- Chassiakos, Yolanda (Linda) Reid, Jenny Radesky, Dimitri Christakis, Megan A. Moreno, and Corinn Cross. 2016. 'Aap Council on Communications and Media. Children and Adolescents and Digital Media'. *Pediatrics*.
- Crowe, Nic, and Simon Bradford. 2006. "'Hanging out in Runescape": Identity, Work and Leisure in the Virtual Playground'. *Children's Geographies*. <https://doi.org/10.1080/14733280601005740>.
- Cummings, Jonathon N., Brian Butler, and Robert Kraut. 2002. 'The Quality of Online Social Relationships'. *Communications of the ACM*. <https://doi.org/10.1145/514236.514242>.
- Duan, Li, Xiaojun Shao, Yuan Wang, Yinglin Huang, Junxiao Miao, Xueping Yang, and Gang Zhu. 2020. 'An Investigation of Mental Health Status of Children and Adolescents in China during the Outbreak of COVID-19'. *Journal of Affective Disorders*. <https://doi.org/10.1016/j.jad.2020.06.029>.
- Eijnden, Regina J.J.M. van den, Gert Jan Meerkkerk, Ad A. Vermulst, Renske Spijkerman, and Rutger C.M.E. Engels. 2008. 'Online Communication, Compulsive Internet Use, and Psychosocial Well-Being Among Adolescents: A Longitudinal Study'. *Developmental Psychology*. <https://doi.org/10.1037/0012-1649.44.3.655>.
- Gross, Elisheva F. 2004. 'Adolescent Internet Use: What We Expect, What Teens Report'. *Journal of Applied Developmental Psychology*. <https://doi.org/10.1016/j.appdev.2004.09.005>.
- Gross, Elisheva F., Jaana Juvonen, and Shelly L. Gable. 2002. 'Internet Use and Well-Being in Adolescence'. *Journal of Social Issues*. <https://doi.org/10.1111/1540-4560.00249>.
- Hall, Richard H. 2016. 'Internet Use and Happiness'. In *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. https://doi.org/10.1007/978-3-319-39396-4_4.
- Hall, Richard H. 2017. 'Internet Use and Happiness: A Longitudinal Analysis'. In *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. https://doi.org/10.1007/978-3-319-58484-3_17.
- Hall, Richard H. 2018. 'Internet Use and Happiness: A Replication and Extension'. In *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. https://doi.org/10.1007/978-3-319-91716-0_37.
- Hall, Richard H. 2019. 'Internet Use and Happiness: An Updated Review of Literature'. In *Communications in Computer and Information Science*. https://doi.org/10.1007/978-3-030-23525-3_3.
- Harter, S. 2012. 'The Self-Perception Profile for Adolescents: Manual and Questionnaires'. *University of Denver*.
- Hawkrigde, Sue. 2018. 'Age of Opportunity: Lessons from the New Science of Adolescence'. *Journal of Child & Adolescent Mental Health*. <https://doi.org/10.2989/17280583.2018.1480166>.
- Hoareau, Natacha, Céline Bagès, and Alain Guerrien. 2021. 'Cyberbullying, Self-Control, Information, and Electronic Communication Technologies: Do Adolescents Know How to Exercise Self-Control on the Internet?'. *International Journal of Bullying Prevention*. <https://doi.org/10.1007/s42380-021-00099-2>.
- Jackson, Linda A., Alexander Von Eye, Gretchen Barbatsis, Frank Biocca, Hiram E. Fitzgerald, and Yong Zhao. 2004. 'The Impact of Internet Use on the Other Side of the Digital Divide'. *Communications of the ACM*. <https://doi.org/10.1145/1005817.1005819>.
- Kaur, Sandeep, and Sangeeta Chauhan. 2021a. 'Adolescents' Happiness: Hedonic or Eudaimonic?'. *International Journal of Indian Psychology* 9 (1): 1951–60.
- Kaur, Sandeep, and Sangeeta Chauhan. 2021b. 'How Do Adolescents Conceptualize Happiness? A Qualitative Inquiry'. *A Quarterly Refereed Journal of Dialogues on Education* 10 (2): 356–76.
- Kilic, A. F., and C. O. Güzeller. 2017. 'Demographic Factors Affecting Internet Using Purposes of High School Students'. *Malaysian Online Journal of Educational Technology* 5 (1): 34–45.
- Kim, Bung Nyun, Subin Park, and Min Hyeon Park. 2017. 'The Relationship of Sexual Abuse with Self-Esteem, Depression, and Problematic Internet Use in Korean Adolescents'. *Psychiatry Investigation*. <https://doi.org/10.4306/pi.2017.14.3.372>.
- Kim, Carolyn. 2017. 'Out-of-Class Communication and Personal Learning Environments Via Social Media: Students' Perceptions and Implications for Faculty Social Media Use'. *Teaching Journalism & Mass Communication*.
- Kim, Junghyun, Robert Larose, and Wei Peng. 2009. 'Loneliness as the Cause and the Effect of Problematic Internet Use: The Relationship between Internet Use and Psychological Well-Being'. *Cyberpsychology and Behavior*. <https://doi.org/10.1089/cpb.2008.0327>.
- Kraut, Robert, and Moira Burke. 2015. 'Internet Use and Psychological Well-Being: Effects of Activity and Audience'. *Communications of the ACM*. <https://doi.org/10.1145/2739043>.
- Kwon, Myoungjin, Sun Ae Kim, and Wi Young So. 2020. 'Factors Associated with Adolescents' Internet Use Duration by Suicidal Ideation'. *International Journal of Environmental Research and Public Health*. <https://doi.org/10.3390/ijerph17020433>.
- Lee, Hye Ryeon, Hye Eun Lee, Jounghwa Choi, Jang Hyun Kim, and Hae Lin Han. 2014. 'Social Media Use, Body Image, and Psychological Well-Being: A Cross-Cultural Comparison of Korea and the United States'. *Journal of Health Communication*. <https://doi.org/10.1080/10810730.2014.904022>.
- Li, Ji Bin, Joseph T.F. Lau, Phoenix K.H. Mo, Xue Fen Su, Jie Tang, Zu Guo Qin, and Danielle L. Gross. 2017. 'Insomnia Partially Mediated the Association between Problematic Internet Use and Depression among Secondary School Students in China'. *Journal of Behavioral Addictions*. <https://doi.org/10.1556/2006.6.2017.085>.
- Liu, Dong, Roy F. Baumeister, Chia Chen Yang, and Baijing Hu. 2019. 'Digital Communication Media Use and Psychological Well-Being: A Meta-Analysis'. *Journal of Computer-Mediated Communication*. <https://doi.org/10.1093/ccc/zmz013>.
- Longobardi, C., M. Settanni, M. A. Fabris, and D. Marengo. 2020. 'Follow or Be Followed: Exploring the Links between Instagram Popularity, Social Media Addiction, Cyber Victimization, and Subjective Happiness in Italian Adolescents'. *Children and Youth Services Review*. <https://doi.org/10.1016/j.childyouth.2020.104955>.

- Lung, For Wey, Bih Ching Shu, Tung Liang Chiang, and Shio Jean Lin. 2020. 'Relationships between Internet Use, Deliberate Self-Harm, and Happiness in Adolescents: A Taiwan Birth Cohort Pilot Study'. *PLoS ONE*. <https://doi.org/10.1371/journal.pone.0235834>.
- Mathers, Megan, Louise Canterford, Tim Olds, Kylie Hesketh, Kate Ridley, and Melissa Wake. 2009. 'Electronic Media Use and Adolescent Health and Well-Being: Cross-Sectional Community Study'. *Academic Pediatrics*. <https://doi.org/10.1016/j.acap.2009.04.003>.
- Mays, N., E. Roberts, and J. Popay. 2001. 'Synthesising Research Evidence'. In *Studying the Organisation and Delivery of Health Services: Research Methods*.
- McDool, Emily, Philip Powell, Jennifer Roberts, and Karl Taylor. 2020. 'The Internet and Children's Psychological Wellbeing'. *Journal of Health Economics*. <https://doi.org/10.1016/j.jhealeco.2019.102274>.
- Mesch, Gustavo S. 2001. 'Social Relationships and Internet Use among Adolescents in Israel'. *Social Science Quarterly* 82 (2): 329–39. <http://www.jstor.org/stable/42955723>.
- Michael, Birkjær, and Kaats Micah. 2019. 'Does Social Media Really Pose a Threat To Young People'. Edited by Ulf Andreasson and Truls Stende.
- More, Nalawade. 2012. 'Study of Internet Use and Health Related Implications of Internet Users'. *International Journal of Advanced Research in Computer Science and Software Engineering*.
- Nie, Norman H., D. Sunshine Hillygus, and Lutz Erbring. 2008. 'Internet Use, Interpersonal Relations, and Sociability: A Time Diary Study'. In *The Internet in Everyday Life*. <https://doi.org/10.1002/9780470774298.ch7>.
- Ofcom. 2021. 'Children and Parents: Media Use and Attitudes Report Content Consumption and Online Activities'. *Ofcom*.
- Otsuka, Yuichiro, Yoshitaka Kaneita, Osamu Itani, Maki Jike, Yoneatsu Osaki, Susumu Higuchi, Hideyuki Kanda, Aya Kinjo, Yuki Kuwabara, and Hisashi Yoshimoto. 2020. 'Skipping Breakfast, Poor Sleep Quality, and Internet Usage and Their Relation with Unhappiness in Japanese Adolescents'. *PLoS ONE*. <https://doi.org/10.1371/journal.pone.0235252>.
- Padmanathan, Prianka, Lucy Biddle, Robert Carroll, Jane Derges, John Potokar, and David Gunnell. 2018. 'Suicide and Self-Harm Related Internet Use'. *Crisis*. <https://doi.org/10.1027/0227-5910/a000522>.
- Park, Hyunju. 2015. 'The Relationship between Internet Use for Non-Academic Purposes and Happiness and Stress in Adolescents'. *Journal of Korean Academy of Community Health Nursing*. <https://doi.org/10.12799/jkachn.2015.26.2.169>.
- Park, So-Youn, and So-Nam Yang. 2015. 'Factors Associated with Internet Use Time among Adolescents: Focused on Convergent Implications'. *Journal of Digital Convergence*. <https://doi.org/10.14400/jdc.2015.13.9.387>.
- Pénard, Thierry, Nicolas Poussing, and Raphaël Suire. 2013. 'Does the Internet Make People Happier?' *Journal of Socio-Economics*. <https://doi.org/10.1016/j.socec.2013.08.004>.
- Premisingh, Dr J. Godwin, and Prajina. P.V. Prajina. P.V. 2012. 'A Study on the Impact of Internet Addiction Among Adolescents'. *International Journal of Scientific Research*. <https://doi.org/10.15373/22778179/aug2013/164>.
- Rains, Stephen A., and Valerie Young. 2009. 'A Meta-Analysis of Research on Formal Computer-Mediated Support Groups: Examining Group Characteristics and Health Outcomes'. *Human Communication Research*. <https://doi.org/10.1111/j.1468-2958.2009.01353.x>.
- Ranieri, Jessica, Federica Guerra, Alessandra Martelli, Valerio Fanelli, and Dina Di Giacomo. 2021. 'Impact of Cybersex and Intensive Internet Use on the Well-Being of Generation Z: An Analysis Based on the EPOCH Model'. *Journal of Technology in Behavioral Science*. <https://doi.org/10.1007/s41347-021-00197-4>.
- Sampasa-Kanyinga, Hugues, and Rosamund F. Lewis. 2015. 'Frequent Use of Social Networking Sites Is Associated with Poor Psychological Functioning among Children and Adolescents'. *Cyberpsychology, Behavior, and Social Networking*. <https://doi.org/10.1089/cyber.2015.0055>.
- Santesteban-Echarri, Olga, Mario Álvarez-Jiménez, John Gleeson, and Simon M. Rice. 2018. 'An Overview of Adolescent Mental Health.' In *Technology and Adolescent Mental Health*. https://doi.org/10.1007/978-3-319-69638-6_14.
- Schemer, Christian, Philipp K Masur, Stefan Geiß, Philipp Müller, and Svenja Schäfer. 2021. 'The Impact of Internet and Social Media Use on Well-Being: A Longitudinal Analysis of Adolescents Across Nine Years'. *Journal of Computer-Mediated Communication*. <https://doi.org/10.1093/jcmc/zmaa014>.
- Shapka, Jennifer D. 2019. 'Adolescent Technology Engagement: It Is More Complicated than a Lack of Self-Control'. *Human Behavior and Emerging Technologies*. <https://doi.org/10.1002/hbe.2.144>.
- Shapka, Jennifer D, and Danielle M Law. 2013. 'Does One Size Fit All? Ethnic Differences in Parenting Behaviors and Motivations for Adolescent Engagement in Cyberbullying'. *J Youth Adolesc* 42 (5): 723–38. <https://doi.org/10.1007/s10964-013-9928-2>.
- Shen, Cuihua, and Dmitri Williams. 2011. 'Unpacking Time Online: Connecting Internet and Massively Multiplayer Online Game Use with Psychosocial Well-Being'. *Communication Research*. <https://doi.org/10.1177/0093650210377196>.
- Subrahmanyam, Kaveri, and Gloria Lin. 2007. 'Adolescents on the Net: Internet Use and Well-Being'. *Adolescence*.
- Taylor, Kyle, and Laura Silver. 2019. 'Smartphone Ownership Is Growing Rapidly Around the World, but Not Always Equally'. *Pew Research Center*.
- Techatassanasoontorn, Angsana A., and Nalitra Thaiprasert. 2013. 'Internet Use and Well-Being of Young Adults'. In *International Conference on Information Systems (ICIS 2013): Reshaping Society Through Information Systems Design*.
- Tsai, Meng Jung, and Chin Chung Tsai. 2010. 'Junior High School Students' Internet Usage and Self-Efficacy: A Re-Examination of the Gender Gap'. *Computers and Education*. <https://doi.org/10.1016/j.compedu.2009.11.004>.

- Turkle, Sherry. 2011. 'Turkle, Life on the Screen'. *Life on the Screen*.
- Twenge, Jean M. 2019. 'More Time on Technology, Less Happiness? Associations Between Digital-Media Use and Psychological Well-Being'. *Current Directions in Psychological Science*. <https://doi.org/10.1177/0963721419838244>.
- Twenge, Jean M., Gabrielle N. Martin, and W. Keith Campbell. 2018. 'Decreases in Psychological Well-Being among American Adolescents after 2012 and Links to Screen Time during the Rise of Smartphone Technology'. *Emotion*. <https://doi.org/10.1037/emo0000403>.
- Twenge, Jean M., Gabrielle N. Martin, and Brian H. Spitzberg. 2018. 'Trends in U.S. Adolescents' Media Use, 1976–2016: The Rise of Digital Media, the Decline of TV, and the (Near) Demise of Print'. *Psychology of Popular Media Culture*. <https://doi.org/10.1037/ppm0000203>.
- Valenzuela, Sebastián, Namsu Park, and Kerk F. Kee. 2009. 'Is There Social Capital in a Social Network Site?: Facebook Use and College Student's Life Satisfaction, Trust, and Participation'. *Journal of Computer-Mediated Communication*. <https://doi.org/10.1111/j.1083-6101.2009.01474.x>.
- Valkenburg, Patti M., and Jochen Peter. 2007. 'Online Communication and Adolescent Well-Being: Testing the Stimulation versus the Displacement Hypothesis'. *Journal of Computer-Mediated Communication*. <https://doi.org/10.1111/j.1083-6101.2007.00368.x>.
- Valkenburg, Patti M., and Jochen Peter. 2009. 'Social Consequences of the Internet for Adolescents: A Decade of Research'. *Current Directions in Psychological Science*. <https://doi.org/10.1111/j.1467-8721.2009.01595.x>.
- Vilhelmson, Bertil, Eva Thulin, and Erik Ellmér. 2017. "Where Does Time Spent on the Internet Come from? Tracing the Influence of Information and Communications Technology Use on Daily Activities." *Information Communication and Society*. <https://doi.org/10.1080/1369118X.2016.1164741>.
- Waal, Ester De, and Klaus Schoenbach. 2010. 'News Sites' Position in the Mediascape: Uses, Evaluations and Media Displacement Effects over Time'. *New Media & Society* 12 (3): 477–96. <https://doi.org/10.1177/1461444809341859>.
- Wang, Ligang, Ting Tao, Chunlei Fan, and Wenbin Gao. 2015. 'Does Psychological Need Satisfaction Perceived Online Enhance Well-Being?' *PsyCh Journal*. <https://doi.org/10.1002/pchj.98>.
- Yoo, Yang Sook, Ok Hee Cho, and Kyeong Sook Cha. 2014. 'Associations between Overuse of the Internet and Mental Health in Adolescents'. *Nursing and Health Sciences*. <https://doi.org/10.1111/nhs.12086>.