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Risk, Opportunities and Interventions of Youth in the Digital Age

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ABSTRACT

While the digital age brings many opportunities for users, it also brings many risks, especially for teenagers. Media platforms collect personal information from users to anticipate their preferences and personalise the most relevant and interesting content. For teenagers, this increases the risk of being exposed to strangers, unhealthy content, hate speech, and false information. For this reason, parental moderation is indispensable, but the reality of parental moderation is difficult. Nevertheless, parents still need to find solutions to protect their children as much as possible.

KEYWORDS

Youth Internet Safety; Parental regulation; Algorithm.

1. INTRODUCTION

In the digital age, people are using digital devices more and more frequently and preferably, while adolescents are exposed to them from birth and digital devices have become an integral part of their lives. In the United States, 93 per cent of 12–17-year-olds have a computer at home, and about 74 per cent use a mobile device to access the Internet. 77 per cent of 13–16-year-olds in Europe have a profile on a social networking site (SNS), with a third of them having more than 100 contacts on SNS (Shin & Kang, 2016). 94 per cent of Spain adolescents use the internet at least once a week, with the majority of them going online every day (Rodríguez-de-Dios et al., 2018)). Therefore, it is important to understand the risks and opportunities for adolescents in the online environment and to analyse protective measures in this context. This article will look at the three aspects of risks, opportunities, and protection when adolescents are in the digital environment. The aim is to encourage parents to actively seek moderating interventions to protect their adolescents in the digital environment to reduce risks.

2. POSSIBLE RISKS AND OPPORTUNITIES FOR YOUTH IN THE DIGITAL AGE

2.1. Risks

Youth may be exposed to many risks in their digital lives. Many scholars have pointed out many risks, such as cyberbullying, exposure to pornography and violence, contact with strangers, and information leakage (Rodríguez-de-Dios et al., 2018; Shin & Lwin, 2017). Adolescents who suffer from cyberbullying experience anxiety, depression, anger and frustration, stress, sleep disorders, and irritability. Exposure to online pornographic material can lead to outcomes that are harmful to

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adolescents' sexual development, such as endorsing pastime attitudes towards sex, viewing females as sex objects, body dissatisfaction, stimulation of sexual preoccupations, and reduced sexual satisfaction (Rodríguez-de-Dios et al., 2018). At the same time, it seems to be increasingly common for adolescents to engage with strangers in their digital lives. Shin & Lwin (2017) mentioned that, according to Pew Internet (2013), one-third of 12-17-year-old Facebook users will befriend someone they have never met. In Singapore, 73 per cent of 10-17-year-olds have had an unpleasant online experience, such as meeting an online stranger who tried to friend them on a social networking site or meet them in real life (Shin & Lwin, 2017). Interacting with people they do not know offline, coupled with the possibility of anonymity, poses risks of deception, manipulation and victimization. Young people may be subjected to abuse or exploitation, unwanted sexual solicitation or harmful face-to-face meetings (Mavoa et al., 2023). However, adolescents' seemingly voluntary disclosure of personal information to strangers does not appear to be that simple in practice. According to Shin & Kang (2016), Internet users are often asked to disclose and share personal information when using online services, joining online groups, or shopping online. Users also voluntarily disclose personal information to reduce mutual uncertainty in computer-mediated communication and to enrich online communication and social networking experiences. On the other hand, when adolescents participate in social networks or online games, they may feel the need to share personal information to enrich the social networking/gaming experience and strengthen social connections with their peers(Shin & Kang, 2016). Instead of youth voluntarily disclosing personal information in online activities, youth are forced to disclose personal information as a way to better participate in online activities. Many scholars have pointed out the risks that youth may face in their use of digital media, but little has been said about the causes of that risk. This article argues that it is attributed to the algorithmic system specific to digital media.

Social media encourages users to disclose personal information, which, as mentioned above, increases the likelihood that users will come into contact with strangers, social media does this to collect personal data and use algorithms to target recommendations to users to maximise commercial profit. According to Costello et al. (2023), social media companies continue to push algorithm-driven content to attract younger users, which generates billions of dollars in annual revenue for the platforms from advertisers targeting children. With such financial incentives, platforms do not proactively correct behaviours that are harmful to young social media users (Costello et al., 2023). To profit, platforms will first and foremost collect information about their users in a pervasive manner. Shin & Kang (2016) argue that marketers encourage teenage consumers to disclose more personal information and claim that this is in exchange for a better online communication experience. For example, SNS users often do not read privacy policies carefully when signing up for SNS services(Shin & Kang, 2016). This may lead to reduced privacy concerns and over-disclosure of personal information among Internet users. In addition to the disclosed personal information that users have agreed to, merchants collect user data in other ways. Marketers use collection tools (e.g., cookie placement, location-based advertising, and behavioural targeting) to gather personal information about young Internet users (Shin & Kang, 2016) to gain a more direct and accurate understanding of user preferences (Tang, 2022). What content users react positively to (e.g., liking or sharing); what profiles and pages users search for; who users send direct messages to; and who users may know offline are all collected and predicted by algorithms (Kim, 2017). More importantly, however, there is evidence that these collections and targeting by platform algorithms are increasingly aimed at teenagers. Marketers have developed a variety of strategies to reach and engage online youth (Shin & Kang, 2016). Costello et al. (2023) noted that while many social media platforms claim that their adverts are not targeted at children, 8% of Apple App Store apps and 7% of Google Play Store apps target minors. Apps targeting children are 42 per cent more likely to share GPS and IP address information with third-party digital advertisers than apps not targeting children, and advertisers spend 3.1 times more money on apps targeting children than on apps targeting the general audience (Costello et al., 2023). Social media platform algorithms are ubiquitously collecting data from users (with or without their informed consent), during which the voluntary disclosure of personal

information induced by the platforms increases the risk of teenagers coming into contact with strangers as mentioned above. However, the risks posed by platform algorithms are not the only ones; after all, this data collected is used to analyse teenagers' personal preferences and to make personalised recommendations, which may also pose more risks to teenagers

Social media algorithmic recommendations influence adolescents' judgement of information, which may explain scholars' views above that adolescents in the digital age may encounter a lot of hate speech, disinformation, etc. As governments have loosened the reins on media content creators and distributors, commercial enterprises have assumed control of the media, producing commercially attractive and mature content, such as political and nude content to which children can be exposed (Ren, 2020). Algorithms have been associated with hate speech, conspiracy theories and fake news (Dujeancourt & Garz, 2023). Hutchinson (2017) stated that fake news refers to the high level of dissemination of inaccurate information on social media platforms such as Facebook, Twitter and Instagram. It is malleable information, dependent on circulation, scale and friction. Fake news often sets high levels of clickbait to make the audience engage (Hutchinson, 2017). According to Margetts et al. (2021), Facebook played a significant role in the spread of highly targeted and misleading adverts during the election, and disinformation 'information epidemics' and 'hate speech' during the 2020 pandemic crisis (Margetts et al., 2021). Not only do algorithms facilitate the spread of fake news on social media fail to provide accurate and objective information to youth. Algorithms also make teens form ideological filter bubbles. Due to algorithmic recommendations, teens tend to only be exposed to content that they are interested in or relevant, even if they are fake news or low-quality content. Sensationalised content is more likely to be pushed than high-quality news content (Dujeancourt & Garz, 2023). According to Dourish (2016), activists in the Occupy Wall Street (OWS) movement were surprised to find that Occupy Wall Street had never been a 'trending topic' on Twitter. Instead, the latest pop star's hairstyle and new tattoos were more important than the massive political action (Dourish, 2016). Putting teenage users into these examples, teens who are happy to pay attention to this low-quality content will be predicted by the algorithms and in turn, continue to recommend this relevant content to them, and they are thus missing out on high-quality content. In the long run, they may become less able to think critically and less aware of real-time news and social dynamics - even though these are the things they should be paying attention to.

Except for these indirect effects, unhealthy content recommended by algorithms to teens can directly cause varying degrees of psychological harm. Ren (2020) mentioned that content creators on Douyin (China's version of TikTok) do whatever they can to get traffic and that some creators, who are teachers, film and post videos of students sleeping in class or of students struggling to learn, which make students feel very embarrassed; some teachers even post pranks played on students or force students to perform controversial acts (Ren, 2020). According to Costello et al. (2023), the amount of harmful content displayed to vulnerable accounts (i.e., those with the word "diet" in their username) on TikTok's "For You Page" is significantly higher than the amount of harmful content displayed to standard accounts. Parents respondents in Costello et al (2023) reported that their child, Alexis Spence, was exposed to algorithm-driven content after joining Instagram that depicted underweight models, as well as links to extreme dieting websites that glorified anorexia nervosa, negative body image, and self-harm. Seven months after opening her Instagram account, Alexis Spence began to show signs of depression and wrote in a post shared on Instagram, "I hate myself and my body ..... Please stop caring about me, I'm wasting time and space." The school counsellor and parents noticed the posts and admitted her to the hospital, where it was known that Alexis Spence suffered from an eating disorder, anxiety, depression and suicidal tendencies (Costello et al., 2023). Overall, most of the risks teens are facing in the digital age may be likely caused by algorithms.

2.2. Opportunities

Even so, digital life presents many opportunities for young people. Digital technology provides adolescents with a wide range of recreational, communicative, informational, and educational

opportunities (Livingstone, 2010). The use of social media facilitates the development of empathy in adolescents, playing online video games or computer games can increase self-reported problem-solving skills (Rodríguez-de-Dios et al., 2018). In addition to these subliminal positive effects, digital life can also directly contribute to adolescents' well-being. Extended networks create opportunities for self-presentation and influence beyond the confines of physical space, through which young people explore, express and realise their aspirational and actual identities (Setty, 2023). In other words, online communication provides an opportunity for adolescents to build, and strengthen their interpersonal relationships without worrying about the limitations of offline communication. Young people report that they enjoy interacting with existing friends and making new connections and relationships (Setty, 2023). New technologies allow adolescents to freely post content, express themselves, share ideas, and interact with each other on social media (Livingstone et al., 2017). Retreating into private digital spaces may be beneficial to relationships because of the perceived freedom from the social constraints that people typically encounter when interacting with others offline (Setty, 2023). In addition, algorithms help users retrieve the most relevant content in a vast stream of information. Algorithmic recommendation brings convenience and reduces the cost of time (Tang, 2022). This article acknowledges the opportunities that the digital age brings to adolescents, but the risks that digital life poses to adolescents remain undeniable. Therefore, it is worth focusing on how to protect adolescents to minimise the risks they face in the digital age.

3. PARENTAL INTERVENTION

Common sense suggests that parental intervention appears to be an effective means of protection, as adolescents' lives are often inextricably linked to parenting. According to Rodríguez-de-Dios et al. (2018), parental mediation is often considered an effective risk prevention strategy. Parental intervention in children's media lives refers to various practices in which parents attempt to manage and regulate their children's experiences with media (Rodríguez-de-Dios et al., 2018). There are two main forms of parental mediation: proactive and restrictive (Rodríguez-de-Dios et al., 2018; Shin & Kang, 2016). Active mediation refers to parents talking to their children about digital media use and providing them with guidance and advice, and restrictive mediation refers to regulating online activities through the use of rules, such as controlling the amount of time adolescents spend online (Rodríguez-de-Dios et al., 2018; Shin & Kang, 2016). While restrictive parental regulation has a coercive effect, it has many drawbacks and is not consistently effective. Livingston (2008) found that parental restriction of adolescents' Internet use for interpersonal interactions helped reduce adolescents' participation in such prohibited activities (Livingstone, 2008). However, Livingstone et al. (2017) also added that parental restrictions can hinder children's initiative and may even create a negative dynamic in which children with restrictive parents learn not to let their parents pay attention to their Internet use (Livingstone et al., 2017). Too much restriction can have a boomerang effect, especially when such restrictions are imposed on adolescents with high autonomy needs (Shin & Kang, 2016). For example, Shin & Kang (2016) showed that about 70% of adolescents hide their online behaviour from their parents, using strategies such as clearing browser history, minimising web browsers when parents are nearby, and deleting instant messages. In addition, as adolescents tend to seek more autonomy and freedom and view Internet use as a personal activity, they are less willing to share their online experiences with their parents. They may even resent it if their parents try to control their Internet activities (Shin & Kang, 2016). Livingstone et al. (2017) make the same point that parents of children between the ages of 9 and 16 prefer more restrictive and less positive mediation (Livingstone et al., 2017). Restrictive mediation may be effective when children are younger, but as children grow older, restrictive mediation not only slowly fails, but may hinder the digital skills of adolescents. The more parents use restrictive conditioning with their adolescents, the lower the adolescents' digital skills become. This is because parents don't teach their children how to use digital devices or how to protect their digital identities. They just check their children's information or block them from accessing certain websites (Rodríguez-de-Dios et al., 2018). On the

contrary, proactive parental mediation is more effective than restrictive mediation. Shin & Kang (2016) argued that proactive mediation, based on dialogue and critical discussion between parents and children, is more likely to develop children's critical thinking skills and scepticism than restrictive mediation based on control. Guided mediation was positively associated with adolescents' concerns about the way online marketers collect personal information and negatively associated with their willingness to disclose personal information on commercial websites (Shin & Kang, 2016). Through proactive intervention, parents can provide their children with guidance and advice on using digital media. For example, explaining why certain websites are good or bad, or suggesting ways to use digital devices safely, the positive effect of this is that proactive mediation can undermine positive attitudes towards pornographic content and the influence of media on teenage drinking. (Rodríguez-de-Dios et al., 2018). From these theories, parents should choose proactive regulation to intervene in the digital lives of adolescents.

However, the fact is that the proactive regulation approach seems to be difficult for parents to practise. Firstly, some parents may lack digital literacy and knowledge of the digital environment. Parents may not be digitally literate themselves and therefore unable to teach their children digital skills. (Rodríguez-de-Dios et al., 2018). Many parents are hampered by a lack of technological knowledge and skills and are unaware of the various apps and platforms their children are using, the characteristics of these networks and the potential risks involved (Page Jeffery, 2021). As an example of the algorithmic influences mentioned above, parents are less concerned about the AI features of the apps or services their children are using, and they even trust service and content providers to respect age restrictions and privacy (Kotilainen et al., 2020). Other practical reasons may also influence and hinder parental intervention. The incidence and extent of parental intervention tend to decrease as children grow up. Specifically, parents play an important role in the social learning of young children because these children spend a great deal of time with their parents. As children grow up, more time is spent outside of the home environment, and parental influence tends to diminish (Shin & Kang, 2016). One respondent from Page Jeffery (2021) stated that it is not always possible for parents to be behind the scenes looking at a screen, especially when children are older, parents are working, and there are multiple children in the home using their own devices, which makes monitoring especially difficult when completing tasks such as homework (Page Jeffery, 2021). While it is always hoped that parental intervention can be used to guide teenagers' use of digital media, this seems to be difficult to achieve.

Parental intervention is indeed a protective tool and active parental regulation works better than restrictive ones. However, even when active regulation is used, it is realistically difficult to achieve. This article hopes that parents may actively seek additional solutions. For example, Page Jeffery (2021) suggests that parents can gain knowledge by engaging personally with digital media and showing interest in their children's online activities (Page Jeffery, 2021). This appears to compensate for parents' lack of digital literacy. In addition, many parents value engaging and communicating openly with their children about internet usage, which not only allows parents to know and understand their children's online activities but also provides their children with appropriate privacy and autonomy (Page Jeffery, 2021). While these may seem simple in theory, there may be many practical impediments in practice. Overall, however, this paper hopes that parents will think positively about ways of responding to minimise the barriers, maximise the protection of their young people and reduce the risks they face in the digital space.

4. CONCLUSION

This article describes the risks, opportunities, and protections that young people may face in the digital age. In the age of algorithms, social media platforms are pervasively collecting information about their users for commercial gain, with or without the users' informed consent, which increases the likelihood that teens will come into contact with strangers. Platforms use the information they

collect to make analytical predictions and target content to users through algorithmic recommendations, which is likely to expose teens to fake news, hate speech, and content that is harmful to their mental health, and subconsciously create filter bubbles that are not conducive to their development. But despite this, the opportunities that the digital age presents to teens are undeniable. In this context, parental protection is crucial. While proactive parental regulation is more effective than restrictive regulation, it is difficult to practice. This article hopes that in the future, parents can actively seek solutions to the difficulties and engage and protect their adolescents' digital lives with better active regulation strategies.

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