

Fending in the Wild:

Adolescents and the Psychological Impacts of Social Media Misinformation

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Abstract

This essay discusses the distinct vulnerability of adolescents to the consumption of misinformation on social media platforms and offers possible explanations for the greater risk they face compared to adults in their daily navigation of social media. This paper investigates how the prevalence of misinformation on social media inevitably leads to detrimental effects, including an increased risk of psychological disorders such as anxiety, and a decreased trust in authority figures. Psychological concepts such as the illusory truth effect are discussed to demonstrate the severity of the current situation. Finally, the current paper proposes potential intervention strategies in the context of education, primarily aimed at reducing the number of adolescents who fall victim to the ever expanding misinformation on social media platforms.

Keywords: Social Media, misinformation, anxiety, cognition, illusory truth effect

In their 2022 study, the Reuters Institute for the Study of Journalism at Oxford raised concerns about the rise of adolescents using social media platforms such as TikTok and Instagram as their primary news and information searching sources. Ofcom, a major broadcasting authority based in the UK, testifies these concerns as their 2022 report found that more than a quarter of adolescents aged 12 to 15 relied on Instagram as their source of news. In fact, with the rise of social media use, BBC has gradually lost its place as the most popular news source among adolescents: only 24% of teenagers use reliable channels like BBC, a significant decrease from 45% just five years earlier. Scholars predict that this trend will rise among adolescents who compliment social media's unique way of delivering information in a concise and "digestible" manner (Hassoun et al., 2023). This trend redoubles concerns about the pronounced cognitive impacts of social media misinformation on adolescents who are particularly vulnerable to fake news. Moreover, these teenagers will be future participants in our democracy. Therefore, it is imperative to discuss the effects of social media misinformation on adolescents.

Consumers of Misinformation: Adolescents

Scholars have found that adolescents are particularly vulnerable to misinformation largely due to their lower willingness to engage in fact-checking compared to adults. Papapicco and colleagues (2022) from the University of Bari in Italy aptly raise concerns about adolescents' lack of motivation to verify information found on social media. In their study, Herrero-Diz and colleagues (2020) found that adolescents aged 14 to 18 displayed overconfidence on how well they can identify misinformation, claiming they have the "skills to unmask" fake news. Alarmingly, when the researchers asked them to assess the veracity of the presented information,

the teenage participants failed to recognize the fallibility of information presented on social media. Furthermore, teenagers lack interest in verifying said information. In one study, adolescents were presented with information from a hoax website, but only three of 54 participants put effort into confirming the validity of the information (Dumitru, 2020). Not only do adolescents consume misinformation mistakenly, but they may also actively seek it out for social validation. One study shows that, in order to prevent social error, teenagers would search the comments section to see whether the information would be socially accepted by their peers (Hassoun et al., 2023). This tendency suggests that adolescents place more value on social validation of their knowledge than on whether the information they consumed is correct.

Misinformation's Impacts on Belief Systems

The detrimental impact of social media misinformation on the cognitive development of adolescents is deeply concerning. Indeed, the emergence of psychological disorders and shifts in attitudes can be traced to none other than the effects of misinformation. The Covid-19 pandemic is a sobering example, where misinformation led countless adolescents to develop anxiety. According to Mmanga and colleagues (2023), adolescents during this time falsely believed that Covid-19 was a sign of the “end of the world,” thus leading to anxiety, which manifested in different ways. For instance, some reported having experienced loss of concentration and motivation to go to school while others testified feeling constant fear for their family’s well being. Additionally, one study published by Verma and others (2022) in *Scientific Reports*, measured anxiety levels of participants both prior to and after sharing misinformation on Covid-19. They found that participants who shared misinformation had significantly higher anxiety levels than those who did not. This finding suggests misinformation not only misinforms

consumers, but also makes individuals more vulnerable to psychological disorders. More concerning was their secondary finding: higher anxiety levels were positively associated with increased likelihood of believing misinformation which leads to a positive feedback loop, trapping individuals into a cycle of being misinformed and anxious. Last but not least, in their socio-demographic analysis, Verma and others (2022) found that those with lower education experienced higher levels of anxiety. Assuming the findings of Verma and colleagues, teenagers, who typically did not complete their education, would arguably be more susceptible to misinformation and, consequently, anxiety.

Furthermore, misinformation from social media can significantly shift belief systems and opinions, consequently changing how individuals engage with novel information. In a seminal 2021 study by Enders and colleagues, researchers presented participants with multiple conspiracy theories and asked whether they believed each to be true. They found that, compared to those who used traditional news outlets such as national TV or online sources, people who used social media as their primary news sources were significantly more likely to believe in conspiracy theories. This finding also held true for misinformation regarding the Covid pandemic. One explanation for such vulnerability is the illusory truth effect, where repeated exposure to false information leads people to believe it is true, despite their awareness of the information's falsity. According to scholars, this effect is especially dangerous, as it can persist for months, even when contradictory and accurate information is presented (Ecker et al., 2022). Social media amplifies these effects as its algorithms repeatedly solicit content users seem to be interested in, individuals are ever more likely to frequently encounter the same misinformation. In line with the illusory truth effect, users may be easily swayed to deem the presented misinformation as true. While there is liminal research on the effects of the illusory truth effect

on adolescents specifically, it can be reasonably inferred from the aforementioned findings that adolescents may be at equal, if not higher, risk to crediting false information.

Translation into the Real World

The real-world ramifications of individual susceptibility to social media misinformation are far more profound as they erode public trust and threaten democracy. Scholarly research finds that misinformation via social media can fuel distrust in government. For example, a case study on Japan during the early phases of the Covid-19 pandemic, conducted by Zhang (2020) from Hiroshima University, revealed that only 56.3% of 1,052 respondents trusted the information announced from the local government. Even more concerning was the fact that only 18% believed the government was sufficiently prepared to mitigate the spread of the disease. This is alarming because it illustrates how misinformation can drive citizens to be skeptical of official government announcements during a major public health crisis that requires full cooperation. The case of Japan exemplifies merely one instance in which misinformation on social media can influence decisions related to health. Ahmed and colleagues (2018) found that people who relied on social media platforms like Twitter to seek health information were less likely to receive the influenza vaccine. Their findings suggest that misinformation — in this case, on anti-vaccination content — has the capacity to dissuade individuals from embracing critical health decisions. Crucially, it becomes evident that the impacts of misinformation reverberate beyond decisions in the domain of health: they undermine democracy. Indeed, political scientists have long voiced concerns regarding the polarizing effects of misinformation when citizens rely on social media as news outlets (Tucker et al., 2018). In his book, *Republic: Divided Democracy in the Age of Social Media*, Cass Sunstein aptly warns that social media's large-scale

disseminating capabilities of fake news and misinformation risks breeding a society that is not only “ill-informed” but also deeply divided across party lines. Hence, the susceptibility of adolescents to misinformation becomes remarkably disconcerting, especially considering their imminent participation in our democracy.

Future directions

On a positive note, scholars have proposed feasible means to reduce the impacts of social media misinformation on adolescents through education. Orosz and colleagues (2024) used an online media education program to investigate whether teaching and providing strategies to identify misinformation would be effective in “fake news evaluation accuracy.” They found that, at least in the short-term, there was a significant immediate effect of their intervention. Participants with a higher than average need for cognition were likely to have long lasting effects of the intervention. This gives way for a practical solution in which schools can initiate learning sessions where students are taught methods for evaluating fake news and perform cognitively engaging activities to enhance their need for cognition. Even without such specific interventions, scholars affirm that merely educating students to recognize misinformation can go a long way in equipping students with the necessary skills to navigate social media plagued with fake news (Chen et al., 2024). Taken together, scholars provide an uplifting message for teenagers who can build their self-efficacy in combating misinformation.

Conclusion

Despite their displays of confidence, adolescents are, in truth, at great risk of falling victims to misinformation from social media platforms. When considering the fact that

misinformation can lead to consequences at the cognitive level, even to the extent of altering one's beliefs, the rising use of social media among teenagers should strike as a warning. Indeed, recent trends compound evidence that the consumption of misinformation can lead to consequences not limited to politics but also public and individual health. Therefore, scholars, teachers, and parents alike must promptly recognize and combat the detrimental impacts of misinformation on adolescents who are the mercy of social media today.

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