

**The Impact of Social Media Misinformation on Adolescents' Cognitive Perceptions and
Belief Systems**

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Abstract

Despite the countless benefits induced by the ever growing use of social media, it is undeniable that its relentless grasp on society is responsible for many difficulties encountered by youth today. In particular, the accumulation of readily available misinformation is detrimental due to its impact on the cognitive perceptions and belief systems of adolescents. With a rise in the use of social media platforms such as Facebook, Twitter and Instagram (particularly the latter in younger generations), users are inadvertently being lathered by the continuous torrent of misinformation perpetuated by innumerable pages and influencers online.

This essay will detail how misinformation can lead to various consequences (namely those concerning conspiracy theories, discriminatory beliefs and body image) that can distinctly affect young people due to their incomplete development of different brain regions and argues that social media has a critical role in tackling its dissemination. This area of research is of great importance as it helps to enhance our understanding of ways in which we can reduce damage caused by this process and hence help to benefit society.

Introduction

In recent years, our population has undergone a drastic social change fuelled by several factors. The development of social media, a tool used regularly by the majority of society, has had a particularly notable effect on our way of living. Social media is often associated with poor mental health (O'reilly & Dogra, 2018), just as events such as the coronavirus (Runkle & Sugg, 2021), and hence may be partly to blame for the ever-expanding public mental health crisis. This may be attributed to innumerable factors including the dissemination of misinformation, which can be tackled through various methods including, inevitably, limiting screen time.

Discussion

Social media is notorious for its role in circulating misinformation, a phenomenon with profusely negative consequences for adolescents. As a result of its misleading nature, misinformation more often than not results in incorrect perceptions or belief systems on an individual and societal level.

Conspiracy theories are one of the countless consequences concerning belief systems that stem from dissemination of misinformation. Although there is debate concerning the definition of such theories (Schuster et al., 2023), they often involve trying to understand events and blaming them on undercover organisations (Nera & Schöpfer, 2023), and can range from outlandish claims that vaccines cause infertility to unwarranted allegations that the Ukrainian War is fake. Belief in these theories seems particularly common in case of disaster and tend to be held most widely amongst young people. This, according to Kari Paul in *The Guardian* (2023), was demonstrated by the Centre for Countering Digital Hate in a

study showing that only 49% of adults agreed with at least four harmful conspiracy statements compared to 60% of 13 to 17 year olds. It is important to note that the rapid growth of social media platforms enables greater access to relevant ideas and is therefore likely to contribute to this statistic.

According to Schuster et al. (2023), the rationale behind adolescents' belief in conspiracy overlaps with that for adults (as discussed by Douglas et al., 2017); they claim that 'existential motives' - associated with security in one's surroundings and political trust- are especially prevalent in young people compared to 'social motives' - associated with peer acceptance- or 'epistemic motives' - associated with comprehending one's surroundings. This is likely related to increased levels of stress during adolescence, which can have a variety of roots from a young person's sensitivity to social disturbance (Hamburg, 1985) to familial turbulence or a lack of personal identity. As a result, juveniles are more likely to have low general trust and political confidence leading to them trying to alleviate this burden through seeking mental and physical asylum to a greater extent than other generations. Hence, they are more likely to turn to conspiracy groups for a sense of safety resulting from support and perceived collective insight that such communities offer. Confirmation bias may also feed a young person's spiral into conspiracy.

Research by Lev-Wiesel et al. (2006) further supports this, illustrating that the majority of participants who experienced peer rejection in adolescence perceive it to have been highly traumatic and influential in shaping their development. As well as contributing to social motives, feeling ostracised from one's peers can elevate concerns about lacking safety in one's surroundings and paranoia. Hence conspiracy theories may be seen to lessen such afflictions for them.

In joining conspiracy groups, young people subject themselves to internalisation (a theory discussed by Vygotsky) of logically and often morally incorrect ideologies, a phenomenon that can be difficult to reverse. This may distort a young person's schema, teaching them an outlook tinged by paranoia and hence alter cognitive perception in terms of untrusting thinking patterns. Therefore, due to social media exposing vulnerable minds to flawed speculation, young people may learn to misinterpret different situations due to cognitive distortions.

Another consequence of conspiracy theories is the role they play in motivating involvement in harmful protests, which, for instance, may promote ungrounded or discriminatory viewpoints (Boulianne & Lee, 2022). This is due to their potential to exacerbate and normalise dangerous beliefs in individuals who already hold prejudice, for instance, if someone with racially aggressive views sees a relevant conspiracy theory online, they may start to believe that their ideas are socially acceptable, becoming desensitised to abhorrent behaviour. This may encourage subsequent severely hateful acts, as demonstrated by the 2019 shooting in a Walmart associated with the white genocide conspiracy theory (Park et al., 2020). It is important to break down the cognitive consequences of social media in order to understand its behavioural impacts.

Enders et al. (2021) however, suggests that conspiracy theories may not be as damaging as they appear as they only develop in people who have a mindset compatible with relevant information. Whether or not a young person has this is likely to be related to their parents' and peers' views.

Social media can also be used to promote health misinformation, leading to potentially dangerous practices and beliefs. Research suggests that Reddit and Twitter are statistically significantly associated with misinformation and harm (Johnson et al., 2022); for example, when it comes to cancer, there is an association between therapies that do not have a scientific grounding and lower chances of survival (Johnson et al., 2018). This suggests that through promoting incorrect cognitive understanding of various diseases, the media can lead to physical as well as psychological affliction. Young people are particularly likely to fall for this as they have been raised using the internet as a source of information and are less likely to have the maturity to question the credibility of different sources.

Body image is another critical issue exacerbated by the media, which Bor et al. (2014) claims to be a sizable issue for Australian youth. Misinformation relevant to body image includes accounts incorrectly promoting various diets such as keto. Accounts may show false 'before and after' pictures or promise an unrealistic result as posts are not scientifically verified and, as pointed out by Marks et al. (2020) can be controlled by anyone, even if they are not sufficiently qualified. An example is that Dedrick et al. (2020) found evidence of misleading information about belly fat reduction plans, which may ultimately set users up for disappointment resulting in poor body image.

The design of social media is such that it pulls us in using notifications and an algorithm to show users more of what they 'like' (Sidhu, 2018), meaning that once a user immerses in health and fitness content, they are shown increasing amounts of relevant posts potentially leading to development of an obsession. This is an issue particularly affecting young people

as they tend to feel under more pressure to attend to their physical appearance than other age groups, potentially because regions of that brain related to need for attention are more sensitive than they are for other age groups (Weir, 2023). It is important to discuss the impact of misinformation relevant to adolescents due to their developing brains.

Poor body image in young people often leads to low self-esteem and contributes to negative views of the self (a negative self-schema). According to Beck's theories, this, negative feelings about the world and negative feelings about the future (the negative triad), can be responsible for the development of depression (flawed cognitive development). Many influencers also promote unfair self comparison for users though only posting the best parts of their lives (Thapa & Subedi, 2018). This contributes to the growing mental health crisis.

There are numerous ways in which we can combat the consequences that spreading misinformation has on adolescents and our society as a whole.

Firstly, studies show that debunking is highly effective when implemented in a timely manner when a person first enters the world of conspiracists (Park et al., 2020). This can be achieved by ensuring proper education of potential conspiracists, enabling easy access to sites that directly challenge misinformation relevant to different theories. Making this available on platforms that young people use, or through means of popular influencers posting links to educational pages may be helpful to target adolescents. A study by Germani et al. (2022) also suggested health organisations such as WHO are able to mitigate the damage caused by the spread of misinformation, claiming that it is important to increase the number of platforms promoting evidence-based debunking messages.

Another means by which to tackle the effects of misinformation is through recognised influencers participating in the body positivity movement, which can help to showcase realistic bodies and counter the disparaging view that living in a larger body is undesirable (Zavattaro, 2021). This discourages young people from attempting to achieve unrealistic beauty standards.

A study by Skaik and Inkpen (2020) suggests that data concerning social media activity may be monitored and analysed to detect signs of a developing mental problem. This is important as it allows for intervention to be implemented before depression becomes clinical.

In closing, although social media can be highly detrimental to public health, encouraging dangerous mind sets and hindering cognitive perception, it can also be used to tackle contemporary problems relevant to misinformation.

Reference List:

Bor, W., Dean, A. J., Najman, J., & Hayatbakhsh, R. (2014). Are child and adolescent mental health problems increasing in the 21st century? A systematic review. *Australian & New Zealand journal of psychiatry*, 48(7), 606-616. <https://doi.org/10.1177/0004867414533834>

Boulianne, S., & Lee, S. (2022). Conspiracy beliefs, misinformation, social media platforms, and protest participation. *Media and Communication*, 10(4), 30-41.

<https://doi.org/10.17645/mac.v10i4.5667>

Dedrick, A., Merten, J. W., Adams, T., Wheeler, M., Kassie, T., & King, J. L. (2020). A content analysis of Pinterest belly fat loss exercises: unrealistic expectations and misinformation. *American Journal of Health Education, 51*(5), 328-337.
<https://doi.org/10.1080/19325037.2020.1795754>

Douglas, K. M., Sutton, R. M., & Cichocka, A. (2017). The psychology of conspiracy theories. *Current Directions in Psychological Science, 26*(6), 538–542.
<https://doi.org/10.1177/0963721417718261>

Enders, A. M., Uscinski, J. E., Seelig, M. I., Klofstad, C. A., Wuchty, S., Funchion, J. R., Murthi, M. N., Premaratne, K., & Stoler, J. (2021). The relationship between social media use and beliefs in conspiracy theories and misinformation. *Political behavior, 1-24*.
<https://doi.org/10.1007/s11109-021-09734-6>

Germani, F., Pattison, A. B., & Reinfelde, M. (2022). WHO and digital agencies: how to effectively tackle COVID-19 misinformation online. *BMJ Global Health, 7*(8), Article e009483. <https://doi.org/10.1136/bmjgh-2022-009483>

Hamburg, B. A. (1985). Early adolescence: A time of transition and stress. *Postgraduate Medicine, 78*(1), 158-167. <https://doi.org/10.1080/00325481.1985.11699062>

Johnson, S.B., Park, H.S., Gross, C.P., Yu, J.B. (2018) Use of Alternative Medicine for Cancer and Its Impact on Survival. *Journal of the National Cancer Institute, 110*(1).
<https://doi.org/10.1093/jnci/djx145>

Johnson, S. B., Parsons, M., Dorff, T., Moran, M. S., Ward, J. H., Cohen, S. A., Akerley, W., Bauman, J., Hubbard, J., Spratt, D. E., Bylund, C. L., Swire-Thompson, B., Onega, T., Scherer, L. D., Tward, J., & Fagerlin, A. (2022). Cancer misinformation and harmful information on Facebook and other social media: a brief report. *Journal of the National Cancer Institute*, *114*(7), 1036-1039. <https://doi.org/10.1093/jnci/djab141>

Lev-Wiesel, R., Nuttman-Shwartz, O., & Sternberg, R. (2006). Peer rejection during adolescence: Psychological long-term effects—A brief report. *Journal of Loss and Trauma*, *11*(2), 131-142.

Marks, R. J., De Foe, A., & Collett, J. (2020). The pursuit of wellness: Social media, body image and eating disorders. *Children and Youth Services Review*. <https://doi.org/10.1016/j.chilyouth.2020.105659>

Nera, K., & Schöpfer, C. (2023). What is so special about conspiracy theories? Conceptually distinguishing beliefs in conspiracy theories from conspiracy beliefs in psychological research. *Theory & Psychology*, *33*(3), 287-305. <https://doi.org/10.1177/09593543231155891>

O'reilly, M., Dogra, N., Whiteman, N., Hughes, J., Eruyar, S., & Reilly, P. (2018). Is social media bad for mental health and wellbeing? Exploring the perspectives of adolescents. *Clinical child psychology and psychiatry*, *23*(4), 601-613. <https://doi.org/10.1177/1359104518775154>

Park, R., Zax, D., & Goldberg, B. (2020). Fighting Conspiracy Theories Online at Scale. In *Ethnographic Praxis in Industry Conference Proceedings, 2020(1)*, 265-278.

<https://doi.org/10.1111/epic.12036>

Paul, K. (2023, Aug 17). Teens much more likely to believe online conspiracy claims than adults – US study. *The Guardian*. <https://www.theguardian.com/us-news/2023/aug/16/teens-online-conspiracies-stud>

Runkle, J. D., Sugg, M. M., Yadav, S., Harden, S., Weiser, J., & Michael, K. (2021). Real-time mental health crisis response in the United States to COVID-19. *Crisis, 44(1)*, 29-40.

<https://doi.org/10.1027/0227-5910/a000826>

Schuster, J., Fobel, L., & Kolleck, N. (2023). Determinants of belief in conspiracy theories about the war in Ukraine among youth. *Political Psychology*.

<https://doi.org/10.1111/pops.12949>

Sidhu, S. (2018). Social media, dietetic practice and misinformation: A triangulation research. *Journal of Content, Community and Communication, 4*, 29-34.

Skaik, R., & Inkpen, D. (2020). Using social media for mental health surveillance: a review. *ACM Computing Surveys (CSUR), 53(6)*, 1-31. <https://doi.org/10.1145/3422824>

Thapa, R., & Subedi, S. (2018). Social media and depression. *Journal of Psychiatrists' Association of Nepal, 7(2)*, 1-4.

Weir, K. (2023, September 1). Social media brings benefits and risks to teens. Psychology can help identify a path forward. *Monitor on Psychology*, 54(6), 46.

<https://www.apa.org/monitor/2023/09/protecting-teens-on-social-media>

Zavattaro, S. M. (2021). Taking the social justice fight to the cloud: Social media and body positivity. *Public Integrity*, 23(3), 281-295. <https://doi.org/10.1080/10999922.2020.1782104>