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ANSES Report: Social Media is Boosting Mental Health Disorders And Suicidal Thoughts Among Teens

A new report reveals social media's alarming impact on teen mental health, with platforms exploiting adolescent vulnerabilities through manipulative design patterns. The study particularly highlights heightened risks for girls, including anxiety, depression, and increased suicidal thoughts.

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Mixed anxiety-depressive disorders (MADD) and suicidal thoughts, online bullying, poorer self-esteem, alcohol, cannabis and psychoactive substance use... social networks exploit young people's vulnerability and actually help boost certain disorders that they are prone to.

This is the conclusion of a large-scale report by the French Agency for Food, Environmental and Occupational Health & Safety ([Anses](#)) which dissects the mechanisms behind digital marketing tools designed to target the specific vulnerabilities and emotional weak spots associated with adolescence. Olivia Roth-Delgado and Thomas Bayeux are part of the team at Anses coordinating the research project. They offered to present the main teachings from this latest report.

The Conversation: What makes Anses' ["The Effects of Social media use on teenagers' mental health" report](#) unprecedented?

Olivia Roth-Delgado: This [expert appraisal](#) is the result of five

years of research and over 1 000 sought-after articles. It is unprecedented in its originality and the extensive nature of the work that are, in our knowledge, unequalled as far as public authorities such as Anses are concerned.

For the first time, certain mechanisms pointing to the ways in which [social networks](#) operate are being linked to effects impacting the health of adolescents. These mechanisms are known as [dark patterns](#) (editor's note: they are designed to capture users' attention and monetise it, and they come in several forms which aren't necessarily limited to social media. Some are also used by [online shopping sites](#), for example).

[Adolescence](#) is a vulnerable time because the brain is still maturing. During this phase, teenage boys and girls experience changes in the way they process and handle their emotions in the reward-related circuits of the brain. They are also more sensitive to social context, which can favour risk-taking behaviour when around their peers. It is also a time of heightened vulnerability for [mental health disorders](#).

Thomas Bayeux: During adolescence, a culture encouraging confrontation with others, an appetite for communication and character building, consisting of testing social norms develops. All of these arguments lead us to the 11-17 age group at which these dispositions occur.

Anses' mission as a public health authority is to assess health risks. That said, in the chapters of the study on practices and maintaining inter-generational relations, the expert review raises the potential positive effects of social media and the motivations encouraging engagement during adolescence.

The report suggests particularly concerning social media-related effects among adolescents including anxiety-depressive disorders, suicidal thoughts or self-harming. What mechanisms are at play?

O.R.-D.: Among the mechanisms we have highlighted and studied featured misleading (or manipulative) interfaces as well as algorithms that produce personalised content. They all equate to attention-grabbing that keep social media users engaged, by offering them increasingly well-targeted or extreme content.

If a teenage boy or girl for example, searches "self-harm" once, this kind of content will be offered repeatedly and can trap them in a negative spiral.

T.B.: Capturing attention serves the business model that

supports these online platforms. It gives them access to a large amount of data which it can capitalise on while equally contributing to ad space sales.

Online platforms have everything to gain from keeping people engaged using the two strategies we have outlined : on one hand, by providing personalised content using increasingly productive algorithms which ensnare users in an information loop, and on the other hand, by highlighting the most impactful content.

Dark patterns roll out familiar techniques such as likes, notifications, scrolling, reels on auto play, etc. Also known as “deceptive design patterns”, these user interfaces have been carefully crafted to trick people into doing things they wouldn’t do otherwise.

The adolescent phase greatly resonates with these “push strategies” that social media implement. At Anses, we are seeing major public health challenges as supply and demand meet, so to speak. The cocktail they produce is potentially explosive !

Where mental health-related disorders are concerned but also, bullying, and alcohol, tobacco, cannabis use along with other risk-taking behaviours that you are safeguarding against, are social networks boosting pre-existing phenomena?

O.R.-D.: Absolutely. Social networks constitute a social space. They offer a sounding board for problems that are present in society, gender stereotypes or encouraging drug use, etc.

T.B.: Social networks contribute to adolescent socialisation and social construction, they provide continuity with the world offline, encompassing both its good points and its flaws. There is no watertight barrier between what happens offline and what happens on social media.

Should the existing rules for protecting minors in society extend to social media?

O.R.-D.: This is actually the founding principle of the [Digital Services Act](#). The European regulatory framework for digital services seeks to vet online content on very large platforms, in line with the following ethos : [“What is illegal offline, is illegal online.](#)

T.B.: This preoccupation motivates one of the key recommendations to emerge from the Anses report, which is that users under 18 can only access social networks designed

and configured for protecting minors. Our intention is not for social media to be eradicated all together. But for technical solutions to be put into place to make social media a safe place for teenagers, and Anses urges platforms to become accountable in this respect.

Going forward, teenagers then discussing their social media habits with their peers, parents, teaching staff or youth workers could prove to be a very good thing. That said, it doesn't let public authorities and online platforms 'off the hook' where adopting collective strategies to make social media a safe space for teenagers are concerned.

The report shows links between social media use with some disorders, without really establishing a cause-effect relationship between the two. Why is this?

O.R.-D.: The cause-effect subject remains a thorny one. It is fair to say that the expert appraisal that we are basing ourselves on is very dense and documented. Our methodology is solid, but it isn't backed up by a "body of evidence". That said, we can vouch for strong associations between social media use and the disorders we have mentioned for which we explicitly highlight the underlying mechanisms at work.

In relation to sleep, for example several factors are involved. When teenagers go on social media at night before bedtime, the [exposure to digital blue light from screens can prolong the time it takes to fall asleep](#), because by stimulating our cognitive alertness, it shortens sleep duration. The long-term effects of chronic sleep deprivation on mental and physical health are well-documented. Add to that the fact that the emotional stimuli involved in going on social media can also prevent sleep. We are seeing that there is a host of proof to support this. But the concrete effects of social media on sleep in teenage boys and girls also depends on their practices.

Similarly, in the event of anxiety-depressive disorders or suicidal thoughts, the type of content on offer plays a major role. The two-way street factor must also come into consideration. Allow me to explain: an adolescent boy or girl who is already psychologically fragile are more likely to go on social media. Content design algorithms pick up on their emotional weaknesses and suggest emotionally-charged content. And this is precisely how teenagers get trapped in a negative spiral. Proving that there is a cause-effect relationship associated with feedback loops and bidirectional effects is however, far more complicated.

And as for social media's impact on self-image, we also have a

convincing amount of evidence demonstrating the same type of mechanisms based on repeated exposure to content that glorifies muscular men and thin women.

Girls seem more sensitive to the negative effects of social media than boys. What is this down to?

T.B.: This is one of the key takeaways of the report. Girls clearly represent a highly vulnerable segment on social media as far as health risks are concerned, and not just concerning how it impacts self-image. More girls than boys on social media are being bullied, and becoming victims of gender shaming, and social pressure... Girls pay more attention to what happens on social media, and comments that are posted.

LGBTQIA+ communities also represent a high-risk segment on social media. They are more likely to become victims of online bullying which is one of the associated health hazards, particularly mental health.

The report from Anses mentions that the amount of time spent on social media is not the only factor that should be considered.

T.B.: Time of use is helpful, but that alone isn't enough to fully grasp the subject. Knowing how long users spend on social media allows us to study certain health factors like sedentariness, despite the growing number of digital nomad tools out there for connecting to social media. Quantifying the amount of time users engage also turns out to be precious in the case of late-night social media use, which is likely to affect sleep, for example.

However, we also know that understanding social media practices is essential for studying some of the related health side effects. It is important to know what you can do on social media : publish, like, read comments, retouch photos, for instance and the emotional attachment involved. It's not about opposing different approaches, but aiming for complimentary.

Your report is based on a research project that fails to address, or barely addresses the impact of the very latest digital tools such as TikTok or [AI chatbots](#). Can we assume that these new technologies increase mental health risks for teenagers as well?

O.R.-D.: The Anses' expert appraisal draws on over a thousand articles mainly published between 2011 and 2021. Due to the time accumulated and spent researching and bringing the appraisal together, the technologies our studies focused on have naturally evolved. That said, we based ourselves on a common core of mechanisms, like deceptive user interfaces (dark

patterns) and content personalisation algorithms that are related to health risks.

Therefore, our conclusions and recommendations can be applied to more recent social media. As for the question of artificial intelligence and AI chatbots, Anses recommends that the subject becomes the focus of future reports.

In your recommendations, you suggest getting teenagers involved in risk-prevention programs.

O.R.-D.: Anses offers young people the opportunity to get onboard with our research, because they know best what motivates them to engage with social media as they are the ones creating and spreading new ways of using social media. This makes including them in discussions and boundary-setting with parents and teachers, all the more important. This will make them more inclined to follow the rules that they actually had a hand in making. Among the recommendations, Anses mentioned the need to promote forums in which young people can share their online experiences.

T.B.: And again, let me remind you that Anses is not recommending banning social media all together, it suggests a complete overhaul of the way networks are designed so they do not harm the health of adolescents.

Interview by Health Journalists Lionel Cavicchioli and Victoire N'Sondé, The Conversation France.

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