

Editorial

Taking Facebook at face value: why the use of social media may cause mental disorder

Facebook, the largest social media network, currently has approximately 2 billion monthly users (1), corresponding to more than 25% of the world's population. While the existence of an online social network may seem harmless or even beneficial, a series of recent studies have suggested that use of Facebook and other social media platforms may have a negative influence on mental health (2–5).

In a recent longitudinal study based on three 'waves' of data (2013, 2014, and 2015) from more than 5000 participants in the nationally representative Gallup Panel Social Network Study, Shakya and Christakis found that the use of Facebook (which was measured objectively) was negatively associated with self-reported mental well-being (3). Both clicking 'like' on the content of others' Facebook pages and posting 'status updates' on one's own Facebook page were negatively associated with mental well-being. Importantly, these results were robust to two-wave prospective analyses suggesting that the direction of the effect goes from Facebook use to lower mental well-being and not the other way around (3). However, due to the observational nature of the analyzed data, these results do not represent causal evidence of a harmful effect of Facebook, but probably—due to the longitudinal nature of the study—represent the best available estimate of the effect of Facebook on mental well-being to date (3). Another recent study supporting that Facebook use could have a negative effect on well-being is that of Tromholt (5) in which the 1095 participants were randomly assigned (or rather randomly urged) to follow one of two instructions: (i) 'Keep using Facebook as usual in the following week', or (ii) 'Do not use Facebook in the following week' (5). After this week, those assigned to the Facebook abstinence group reported significantly higher life satisfaction and more positive emotions than those assigned to the 'Facebook as usual' group (5). However, due to the unblinded design of this study, its results do not represent

causal evidence of the effect of Facebook either—an effect, which will be difficult to establish.

If we nevertheless assume that Facebook use indeed has a harmful effect on mental well-being, what is then the mechanism underlying it? This aspect remains unclear, but an intuitively logical explanation—with some empirical support—is that people predominantly display the most positive aspects of their lives on social media (6) and that other people—who tend to take these positively biased projections at face value—therefore get the impression that their own life compares negatively to that of other Facebook users (7). As indicated by the recent findings by Hanna et al., such upward social comparison is very likely to mediate the negative effect of Facebook use on mental well-being (4).

Is it plausible that a negative effect of Facebook use on mental well-being contributes to development of outright mental disorder? The answer to this question is most likely 'yes', as it is well established that low levels of self-reported mental well-being are a rather sensitive marker of mental disorder—especially depression (8). Furthermore, individuals prone to depression may be extra sensitive to the potentially harmful effects of social media due to so-called negative cognitive bias, which is a prevalent feature in this population (9–11). In the context of Facebook, the negative cognitive bias could likely entail that individuals vulnerable to depression would feel that their own life compares *particularly* negative to that of other people on Facebook. In addition to depression, it would seem that Facebook and other picture-driven social media platforms could also have a harmful effect in relation to mental disorders where a negative/distorted self-image is part of the psychopathology, such as eating disorders (4, 12).

If the use of social media such as Facebook does compromise mental health, we may be facing a global epidemic of mental disorders, which probably has its largest impact on the younger generations that use these applications the most (3). Therefore, the psychiatric field must take this possibility very seriously and conduct further studies on the

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effect of social media on mental health, and ways to mitigate this effect if it is indeed a harmful one. One way to do this could be to stress again and again—for children and adolescents in particular—that social media is based on highly selected and positively biased projections of reality that should not be taken at face value.

Conflict of interests

The author declares no conflict of interests.

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