

## **The Causes of Social Media Addiction**

**Youlan Li**

With the rise of digital technology, social media has become a prominent part of people's lives with 9 out of 10 teens who have at least one social media account (Campbell, 2023), bringing conveniences such as working, studying, and entertainment. As people become more dependent on social media, more and more individuals have developed addictions to interactive platforms such as Instagram, Snapchat, BeReal and TikTok. It seems impossible for them to leave the chat box and not check new messages. The outcome of frequent use of social media leads to addiction due to the interactions between levels of dopamine in the brain and the social environment.

The dopamine levels in the brain have shown a significant impact on the functioning of the brain and further addiction behaviors to social media. To start, dopamine is a type of neurotransmitter in the brain and is responsible for sending chemical messages. Dopamine's functions on the brain include memory, reward pathways, and motor coordination. There are 4 major dopamine "pathways" that act as connections for chemical signals known as neurotransmitters. "Three of these pathways - the mesocortical, mesolimbic, and nigrostriatal pathways - are considered our 'reward pathways' ", which will bring users a feeling of joy (Haynes, 2018). Once dopamine gets released into the cortex when we are doing something pleasurable, we seek out more of that feeling once we get a taste of it for the first time. Through long-term potentiation, a process when the connections become stronger due to the frequent response to stimulus, which has resulted in a reward. In this case of social media addiction, the frequent stimulus is the social media updates and notifications, which are sent to the brain along the reward pathway and makes the media user feel good. In addition, social media creates the Variable Reward Schedules, which "works by positive stimuli being provided at random intervals" (Burhan & Moradzadeh, 2020). The Variable Reward Schedules are demonstrated by the phone users frequently checking their new messages at variable intervals for "something that could be intrinsically rewarding", according to Burhan & Moradzadeh. The likes on social apps evoke these users' feelings of happiness and gratification, which leads to a temporary increase in dopamine levels. However, as users quickly get bored and climax starts to wear off, individuals

look for more to satisfy their internal needs of fleeting pleasure, which is known as tolerance. As a result, the addictive behavior has formed because social media variable-interval notifications frequently stimulate the temporary excitement of dopamine levels.

Moreover, the social environment is a complex interaction between family functioning and individual experiences. Many studies on social media addiction have found the crucial role that family factors play “such as secure attachment, parenting style, parental expectations and so on” (Shi et al., 2017). An experiment conducted by Senormaci and fellow researchers, with a sample of 30 male patients who were diagnosed as having Internet Addiction, demonstrated the effect of family on social media addiction, such that unhealthy family relationships and conflicts were directly related to Internet Addiction in a large younger sample. Furthermore, family is considered to be an important factor for the development of self-esteem and reduction of the chance of being media addicts. In the period of sensitive and vulnerable adolescence, teens tend to establish a stable social relationship that reduces the level of emotional loneliness and “gain a sense of belonging through group acceptance” (Shi wet al., 2017). As a result, lonely individuals would seek interactions with strangers online. Based on Caplan’s model, these lonely individuals engage in online social communication as an “escape from their negative mood, and consequently further reinforce Internet use” (Youssef et al., 2020). A vicious cycle between loneliness and social media addiction has formed. Besides, Park et al. addressed that domestic violence and unequal family status may enhance social media addiction in younger generations and suggested that the prevention program for addiction should also include the parents. From the previous experiments and research studies, family functioning and individual’s belongingness has demonstrated its importance on the individual’s mental stability, where a healthy relationship could reduce the chance of getting addicted to social media.

The frequent use of social media leads to dependency and further addiction as a result of dopamine levels and the social environment. Excitement of dopamine levels triggers the reward system, which is the primary biological cause of the addiction. Additionally, social off-line interactions such as family and individual relationships also play an essential role in the dependence & addiction cycle, where social media could be a relief from reality. The interactions between dopamine levels and the environment together form the cycle of addiction on social

media. However, once we have control of our use of social media, social media may not always be negative and can even boost our productivity or efficiency on certain tasks. The impact of social media totally depends on individuals' self or external control.

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