

## The adverse effects of computers on early stages of human development

Today it is hard to imagine a life without computers given their ubiquitous nature. Almost every aspect of our day-to-day life has been transformed because of computerization. What's more is that nowadays computers are being used by all age demographics, ranging from a 5-year-old kid to a 75-year-old grandparent. For children, computers have become a source of education and entertainment, whereas for adults they are also a means through which they can conveniently render services such as banking, travel bookings, messaging and shopping. Though the advent of computers offers countless benefits across all age groups, it also presents one of the biggest social problems of today – the adversarial effects of computer use on the early stages of human development.

It is my belief that computerization is fundamentally damaging the physical, social, and mental development of children and young adults in our society as they continue to increase their interactions with and dependence on computers. This is a reason for great concern as their interactions with computers may reinforce unhealthy ideas and behaviours. What's worse is that these behaviours may eventually manifest as habits that may be irreversible in the long term. In the subsequent paragraphs, I will further discuss the negative implications of computerization on the physical, social, and mental development of humans during early childhood and adolescence.

There is an entire generation of children today who are born into an environment equipped with digital gadgets like laptops, tablets, gaming consoles and smartphones. Hence, they can indulge in various forms of entertainment from watching movies to playing video games, all while staying indoors in the comfort of their rooms. I remember that as a kid being confined to my room was a form of punishment that I despised. However, for this “digital” generation, it is the preferred option. It is needless to say that staring at a screen playing video games or watching movies, especially for extended periods, is a fairly sedentary activity that doesn't increase the heart rate to level that would substitute for exercise. Consequently, we now have a generation that is more susceptible to poor vision, frail posture, tendinitis, back injuries, and even obesity. Moreover, by engaging in computer-related activities over physical activities, children miss out on additional benefits of exercise like better sleep quality, boosted energy levels and improved self-confidence.

If we consider the social implications, children in their adolescence suffer from a lack of basic social skills. There are many social interactions that require one to unconsciously pick up on non-verbal cues like body language and facial expressions. However, with texting over the phone becoming a popular means for teenagers to communicate with their friends, any chance of face-to-face interaction is eliminated. Furthermore, many applications today create some form of exclusion as algorithms filter out content that best serves the needs of the user. As a result, the user is unintentionally placed in a virtual bubble, which creates an inherent perspective bias that only becomes stronger over time. This kind of bias is extremely dangerous for anyone, especially those naïve and unassuming teens who have yet to develop a worldview. Social media apps like Facebook, Snapchat and Instagram, that garner the attention of millions of teens, are notorious for surfacing filtered content to maximize user-retention. Hence, I fear that by using such platforms, the coming generation will develop biases that may produce a level of prejudice that could permanently impair their ability to form diverse social relationships.

Finally, the use of computers by children today has a significant influence on their psychological development. If their use isn't curtailed, computers and their plethora of applications, can lead to a behavioral addiction in children. In fact, there have been many cases reported of withdrawal symptoms observed in teens whenever they are denied access to their gadgets. In cases where video games are taken away, it is common to witness teens react with aggression and hostility. Alternatively, with the popularity of social media among teenagers, teenagers have become conditioned to associate their self-worth with arbitrary numbers like the number of likes on their picture or the number re-tweets their post received. Hence, I suspect that we now have teenagers who are growing up with lower levels of self-esteem and higher propensity for depression.

In conclusion, our reliance on computers today has undoubtedly benefited society in more ways than one. However, for children and adolescents with developing bodies and impressionable minds, computers are like double-edged swords that are actually harming them while simultaneously protecting them. Since computers are so prevalent in almost every aspect of our lives, it is impractical to completely eliminate their interactions with humans during early stages of development. Moreover, as use cases for computers are diverse and ever-increasing, it is even harder to define or prescribe a quantity of usage that is applicable to all children and teenagers, thus making it a non-trivial problem to solve.

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