

# Tick-tock: now is the time for regulating social media for child protection

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In this era of an exponentially growing cyber world, social media has become an integral part of children's and adolescents' lives. Since the beginning of the COVID-19 pandemic, there has been a drastic rise in internet access and media device usage.<sup>1</sup> However, concerns about the potential negative impact of social media on children have grown given the recently increasing number of children harmed by the intake of a street snack after the viral spread of a TikTok video. The product, called 'Dragon's Breath' (a form of liquid nitrogen), has caused varying degrees of burns on the skin, caustic oesophageal injury, and food poisoning in Indonesia, the USA, and other parts of the world.<sup>2</sup> We, therefore, would like to draw the attention of global paediatric practitioners towards this alarming phenomenon.

Social media and internet use are virtually universal among children and adolescents, with the majority of youngsters worldwide owning smartphones and surfing social networking sites for at least 21 hours per week.<sup>1</sup> The first of such innovations introduced were from Facebook in 2004 and Twitter in 2006, rapidly followed by many others, including YouTube, Instagram, Snapchat and TikTok, which are now the most popular social media platforms globally.<sup>1</sup> TikTok, owned and launched by the Chinese company ByteDance in 2016, is a short-form video-hosting platform where users create and share 3–10 s videos through personalised profiles or pages. It has recently gained status as the dominant social media of choice for its user-friendly interface and freedom allowed in content posting. From January 2018 to August 2020, the number of monthly active users on this platform grew by 800%, reaching a total of 100 million in the USA and over 1 billion globally.<sup>3</sup> Among these users, 25% are from 10 to 19 years old.<sup>3</sup>

Although social media is a novel way of interacting with others and influences many people's social lives, of concern for society is the potential unfavourable and sometimes harmful effects of uncensored

content on such platforms. In January 2023, for example, a viral video trend on TikTok showed children blowing fumes out of their mouths, noses and ears after eating 'Dragon's Breath', also known as Chiki Ngebul or Chikibulis in Indonesia. The product is created by dipping candies into liquid nitrogen (with temperatures reaching—196°C) to enable a vapour effect when they are eaten. In fact, a safety alert had already been issued by the US Food and Drug Administration (FDA) in 2018 for a potential risk of severe injury, including skin burns, caustic oesophageal injury and perforation. However, because of the widely uploaded clips on TikTok among young users, the product became trendy again and at least 25 children in Indonesia were hurt in a month's time after the consumption of the Dragon's breath candies. Similar injuries are increasingly reported in the USA, Asia and other regions.<sup>2</sup> These developments create a considerable public health problem, as caustic oesophageal injuries can cause irreversible damage to the oesophagus, leading to stricture that requires repeated endoscopic dilatations and even oesophageal replacement surgery. These procedures diminish quality of life among many afflicted individuals. Another troublesome phenomenon is the spate of tic-related and Tourette syndrome-related videos in social media, as the popularity of the video-hosting site grew during the global crisis, along with the increasing number of young patients presenting with tics at neurology clinics. These tic videos are believed to be an example of a mass sociogenic illness involving the imitation of behaviours for secondary gain or unidentified reasons. The spread of this phenomenon among young users the world over has been enhanced by social media use.<sup>3</sup> The above-mentioned examples are only the tip of the iceberg with respect to the adverse effects of unregulated social media. The social media, where other dangerous viral trends have proliferated, has been associated with other harmful risk-taking behaviours, from climbing on tall stacks of milk crates to the massive intake of frozen honey, as well as the lethal 'Blackout Challenge',

which caused the death of more than 20 youngsters in 2 months' time in the USA.<sup>4</sup>

Young individuals are more prone to such conduct on social sites. A positive relationship between the posting of risky behaviours and increased engagement in such acts has been demonstrated and explained through social norms and social learning theories.<sup>5</sup> While 13 years old is the minimum age for a Tiktok user, the app does not use any age verification tools when new users sign up. Hence, children could have access to explicit and inappropriate content, suggestive themes and challenges without restriction, with a quick hashtag search on the app. This is of greater concern in families of lower socioeconomic class and parental educational level. Previous studies had proven that parents with higher income or educational level were associated with more parental childcare time and parental control over their children's behaviour and conduct, reflecting an influence of social inequalities.

What is more concerning is the popularity and transmissibility of these behaviours on social media. For instance, the 'Ice Bucket Challenge', a campaign with a good intention to raise awareness and support for patients with amyotrophic lateral sclerosis through the sharing of challenge completion videos on social media, was found to be as transmissible as the H1N1 2009 influenza pandemic and inadvertently had caused adverse health effects on some participants; this transmissibility may increase further with support from people of high net worth.<sup>6</sup> This is even of more concerns for dangerous 'challenges' solely aiming at attracting views on social media without a meaningful intent. Even as the COVID-19 crisis has caused significant morbidity, mortality, and economic loss around the world, this 'imperceptible social media pandemic' is placing the next generation in peril and therefore deserves equal attention.

As paediatric practitioners, we are in a unique position to provide timely anticipatory media guidance to parents and detect media-related issues should they arise. Recommendations have been presented by the American Academy of Pediatrics on the role of medical practitioners in this issue.<sup>7</sup> Although social media providers are granted certain freedoms, social responsibility must also be exercised to protect the next generation, who are vulnerable to the threats of these technologies. We, therefore, urge the authorities to implement prompt and more stringent child protection regulations on the

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use of social media. While there is no specific international law enforcement on internet regulation, major international organisation, for example, the UNICEF, Save the Children, United Nation could join hands with internet and social media providers for making pledge to protect children. The European Commission of the European Union has established alliance to protect minors online through by self-regulation as well as agreement among internet providers to take positive action to make internet a safer place for kids which includes optimising reporting tools for users, age-appropriate privacy settings, wider availability and use of parental controls, etc. Should there be any infringement or neglect of child protection principles, the social media provider should be disciplined by international authorities. On the other hand, products that are deemed dangerous for instance 'Dragon's Breath' should be banned at international level through international trade regulation and limiting the access to these through local legislation. Parents are also reminded to supervise online pursuits of their children through active participation and communication. There are many programmes and apps available in the market to aid parents in monitoring their children's social media account and detect any potential inappropriate content. Filters are also available for phone or tablets to prevent children from accessing to harmful websites. However, it would be more effective for parents to encourage their children to be safe social media users through counselling and being their role

model, instead of monitoring alone. One single paediatric injury or death is far too many. How many more paediatric injuries and deaths must we witness before action is taken against unregulated social media?

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