

Let's Do a Challenge: Young Adults' Experiences with Risky Social Media Challenges

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Abstract

Background: Social media challenges (i.e., people recording videos of certain behaviors while encouraging others to do the same) have become increasingly popular. Risky variants of these challenges portray high-risk behaviors that can lead to serious negative consequences and even death.

Objective: The current study aimed to gain insight into young people's exposure to risky social media challenges, their participation and engagement in these challenges, and their evaluations regarding these challenges.

Methods: A survey was conducted in which adolescents and young adults (N = 386; age range 16-25 years old) answered questions about their exposure, engagement, and evaluations regarding an array of risky social media challenges (e.g., the Cinnamon challenge and the Benadryl challenge).

Results: Findings revealed that many young people are often exposed to risky social media challenges, most often via Instagram and TikTok and by people not directly known to them. Furthermore, more than one-third of adolescents and young adults said to have participated in a challenge. Interestingly, most indicated not to post participation in a challenge on social media or convince others to join them. Last, evaluations of risky social media challenges (attitudes, social norms, and intentions [of others]) were relatively negative.

Conclusions: Combined, these findings suggest a discrepancy between young people's evaluations regarding participation and their actual behaviour (e.g., quite high with one-third participation rates). This, together with the high exposure rates to these risky challenges, emphasizes the need for more research on this rising phenomenon and regulation or prevention efforts.

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Let's Do a Challenge:

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Abstract

Social media challenges (i.e., people recording videos of certain behaviors while encouraging others to do the same) have become increasingly popular. Risky variants of these challenges portray high-risk behaviors that can lead to serious negative consequences and even death. The current study aimed to gain insight into young people's exposure to risky social media challenges, their participation and engagement in these challenges, and their evaluations regarding these challenges. A survey was conducted in which adolescents and young adults ($N = 386$; age range 16-25 years old) answered questions about their exposure, engagement, and evaluations regarding an array of risky social media challenges (e.g., the Cinnamon challenge and the Benadryl challenge). Findings revealed that many young people are often exposed to risky social media challenges, most often via Instagram and TikTok and by people not directly known to them. Furthermore, more than one-third of adolescents and young adults said to have participated in a challenge. Interestingly, most indicated not to post participation in a challenge on social media or convince others to join them. Last, evaluations of risky social media challenges (attitudes, social norms, and intentions [of others]) were relatively negative. Combined, these findings suggest a discrepancy between young people's evaluations regarding participation and their actual behaviour (e.g., quite high with one-third participation rates). This, together with the high exposure rates to these risky challenges, emphasizes the need for more research on this rising phenomenon and regulation or prevention efforts.

Introduction

Social media have become an important part of young adults' everyday lives, with young people spending over two hours a day on social media platforms ¹. A relatively new phenomenon on these platforms are social media challenges, which are becoming increasingly popular ². These challenges can be defined as people recording and uploading videos in which they are performing stunts or showing certain behaviors while at the same time encouraging others to also engage in these behaviors ^{3,4}. Social media challenges can range from harmless (e.g., dance moves or lip-syncing) to very harmful (e.g., swallowing laundry detergent pods, trying to break skulls, and choking until passing out), and everything in between ⁵⁻¹⁰. The harmful variants of these challenges portray high-risk behaviors that can lead to serious negative consequences and even death for those involved ^{7,11}. Recently, news attention has been given to the deaths of two young girls in the US, which were supposedly a consequence of participating in the 'blackout challenge' on TikTok ¹². Furthermore, the Paqui 'One Chip Challenge' was pulled from shelves following the death of a teenager ¹³.

It is not surprising that youth are encouraged by and engage with risky social media challenges. Adolescence and young adulthood is characterized by a general proclivity for risk-taking ^{14,15}, and particular susceptibility to social influence ¹⁶ as youth are attuned to social status and a sense of belonging to the peer group ¹⁷. Engaging in risky behaviors can be a way for young people to conform to the peer group and gain status among peers, ¹⁸ as well as a way for peer groups to establish a group identity ¹⁴. However, given the potentially detrimental health outcomes of some of these challenges, regulation and prevention efforts seem warranted. In the midst of lawsuits and growing public concerns about the potential harm for minors that videos on these platforms might have ^{19,20}, platforms themselves are also trying to remove risky content, and redirecting searches for harmful content to information about stop and think mechanisms ²¹. Yet, despite cases highlighted in the news, little is known about the extent to which youth come into contact with and participate in these risky social media challenges. This may be explained by the fast pace of social media, and how quickly new challenges come into existence, making it difficult to 'capture' the phenomenon.

Existing research into challenges has mainly focused on (motivations for) participation in specific challenges^{2,5,22,23}. Less is known about exposure to the larger body of risky social media challenges, i.e., to all the various challenges that are currently popular. A recent quantitative study revealed that almost half of all respondents had engaged in at least one risky challenge⁴, suggesting young people's engagement in these challenges is widespread. The relevance of this topic, together with the limited knowledge on how much young people come into contact with these challenges, where they see these challenges (which platforms and posted by whom), and whether they participate in these challenges in general, highlights the need to better understand the scope and context this phenomenon.

In addition, current knowledge on young people's evaluations of risky challenges remains relatively unknown. In line with several behavior prediction theories such as the theory of planned behavior²⁴, it is important to understand people's evaluations to be able to predict their behavior. Factors such as young people's attitudes and perceived social norms towards risky challenges, as well as their perceived personal agency to engage in these challenges, could be indicative of their (future) engagement in these challenges²³. To date, a few recent studies examined *why* young people participate in social media challenges and these offer support for several motives, ranging from entertainment purposes to social purposes²⁻⁴. Most support seems to be found for social motives. For example, it was found that participants who perceived themselves to be popular and had popularity-related concerns (e.g., FOMO) were most at risk for partaking in some specific risky challenges (e.g., the birdbox challenge, Cinnamon challenge, and salt and ice challenge)⁴ and that participation in the Cinnamon challenge specifically was related to perceived social benefits²³. With the aforementioned studies offering valuable insights into the motivations to participate in risky challenges, we aim to extend this relatively small research field by investigating young people's exposure to and participation in the most popular risky social media challenges in 2022²⁵, as well as their evaluations of these challenges. The current study therefore has two goals: (1) to gain more insight into young

people's exposure to social media challenges, including the context in which they are exposed to these challenges (where is it posted and by whom) as well as their participation and engagement in them, and (2) to understand how young people themselves evaluate these challenges, in terms of their attitudes, norms, self-efficacy, and intentions regarding these challenges.

Methods

The study consisted of a survey in which participants answered questions about their experiences with risky social media challenges. The study was approved by the Ethics Committee Social Sciences of Radboud University (ref. ECSW-2022-139). Data management was in line with the data management protocol of Radboud University. The study materials, anonymized data, and analysis script of the study are available on the Open Science Framework²⁶.

Sample

Participants were adolescents and young adults between 16 and 25 years old and were recruited via Panelclix, a recruitment agency for online studies. Panelclix recruited a sample that was representative in terms of age, sex, and geographical location. Participants received credits for their participation, which they could redeem for financial compensation. We determined the a priori sample size ($N = 400$) based on the available budget.

The initial sample consisted of 436 participants. However, we excluded participants who did not provide informed consent ($n = 10$), who spent less than 1 minute completing the survey ($n = 21$), who only provided demographic information ($n = 1$), who did not meet the age requirements for the study ($n = 2$), and who did not complete the survey seriously based on their answers to the open questions in the survey ($n = 16$). Thus, the final sample consisted of 386 participants ($M_{age} = 20.77$, $SD_{age} = 2.72$) of which 48.2% identified as male, 50.8% as female, and 1.0% as other. All participants were fluent in Dutch. Part of the participants attended Dutch secondary school, divided over preparatory vocational education ($n = 18$; 4.7%), senior general secondary education ($n = 39$; 10.1%), and preparatory university secondary education ($n = 32$; 8.3%). Others were continuing their

studies, attending higher vocational education ($n = 110$; 28.5%), applied university ($n = 107$; 27.7%), university ($n = 78$; 20.2%), or other ($n = 2$; 0.5%). Participants reported using different social media platforms and spending most of their time on WhatsApp ($M = 6.06$, $SD = 1.51$; '31-60 minutes a day'), YouTube ($M = 5.65$, $SD = 1.98$; '31-60 minutes a day'), Instagram ($M = 5.44$, $SD = 1.76$; '1-30 minutes a day' to '31-60 minutes a day'), Snapchat ($M = 4.88$, $SD = 2.19$; '1-30 minutes a day'), and TikTok ($M = 4.61$, $SD = 2.66$; '1-30 minutes a day').

Procedure and Measurements

Participants completed the survey via *Qualtrics* in December 2022. The survey took approximately 5-10 minutes to complete. At the start of the survey, participants read information about the study and provided informed consent. The first set of questions was about their age, gender, and educational level. Then, we introduced the questions related to the first aim (exposure to and engagement in risky social media challenges). We started by explaining that "risky social media challenges" refer to challenges in which people record themselves doing certain risky or dangerous activities, which are then posted on social media. We also explained that, with such challenges, people typically encourage others to partake in the challenge. As an example of risky social media challenges, we mentioned the Cinnamon challenge and the Choking challenge. We then presented participants with a list of the most popular risky social media challenges (see Appendix A for a complete list and description of each challenge) that we compiled based on the challenges that have been examined in previous research^{4,7,8} and were mentioned in popular online sources²⁵. We asked participants to indicate to what extent they were familiar with each of the challenges (i.e., had heard of it and/or had seen it on their social media), and whether or not they had participated in the challenge themselves. Next, we asked participants on which social media platforms they typically see risky challenges (e.g., *Instagram*, *TikTok*, *WhatsApp*), which people in their social network usually share these challenges (e.g., strangers, influencers or friends), whether or not they had shared

a challenge on social media themselves, and whether or not they had tried to persuade someone else to participate in a challenge after they had participated in it themselves. Next, we asked participants about their attitudes, intentions, social norms, others' participation, and self-efficacy to participate in these risky social media challenges. Finally, we assessed participants' frequency of social media use for several popular social media platforms. All items and their response scales can be found in Appendix B.

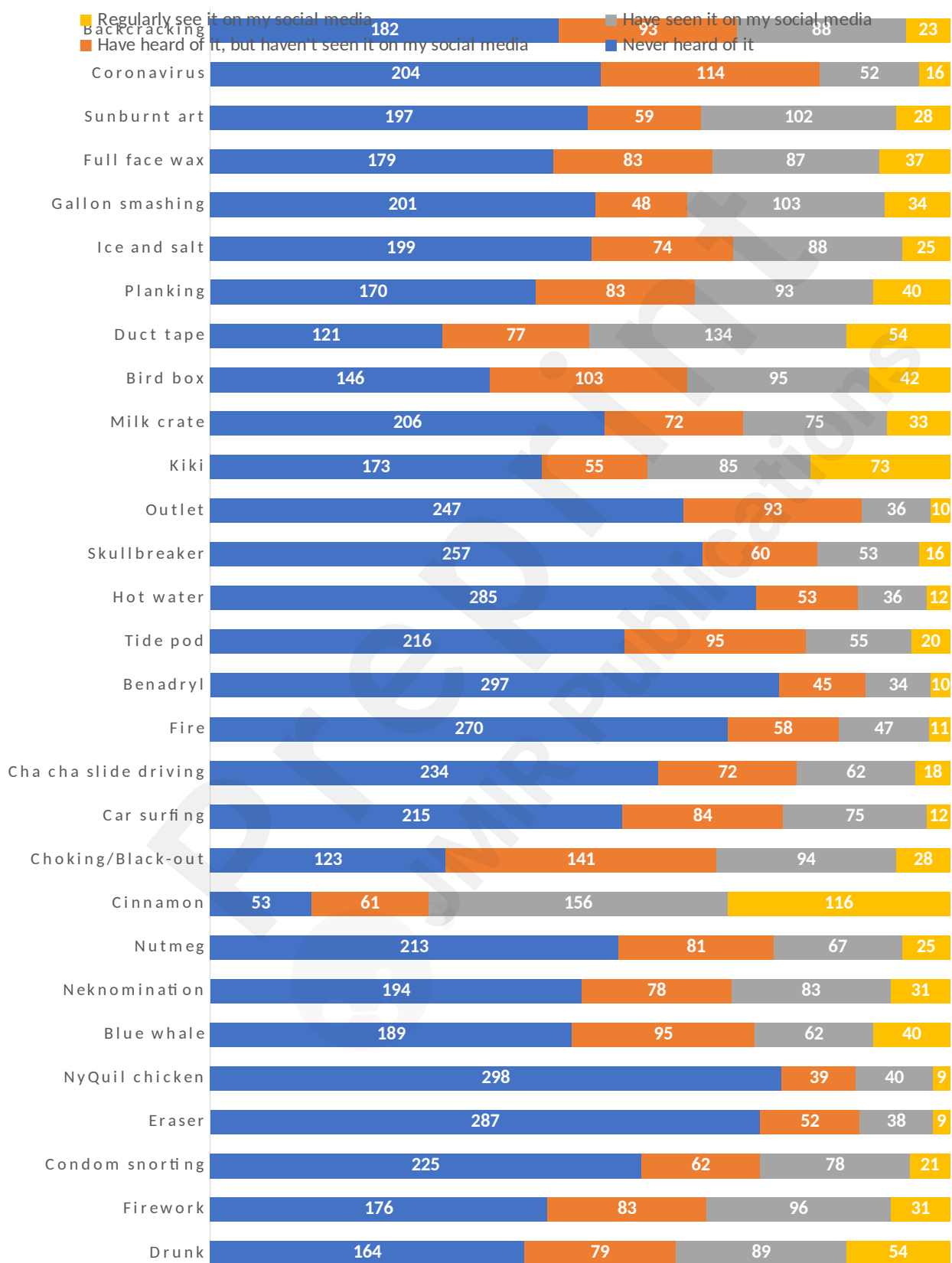
Results

Aim 1: Exposure to and Engagement In Risky Social Media Challenges

First, when examining *which* challenges participants had seen, it became clear that there were many challenges that participants had heard of and seen on their social media. Figure 1 depicts an overview of participants' exposure to risky social media challenges for each challenge individually. The answers '*have seen it on my social media*' and '*regularly see it on my social media*' indicate direct exposure to these challenges. The vast majority of participants ($n = 344$; 89.1%) indicated having seen at least one of these risky social media challenges. Of those participants who saw challenges, most participants indicated having seen between 2-8 of the pre-listed challenges ($M = 6.48$, $SD = 4.48$), and between 1-3 challenges regularly ($M = 3.92$, $SD = 3.34$). The top three regularly seen challenges were the Cinnamon Challenge ($n = 272$; 70.5% of all participants), the Duct Tape Challenge ($n = 188$; 48.7%), and Kiki challenge ($n = 158$; 40.9%).

Fig. 1 *Exposure to Risky Social Media Challenges (N = 386)*

Exposure to risky Social Media Challenges (N = 386)



Second, when examining *where* (i.e., which platform) participants most often see challenges, results showed that participants exposure to risky challenges is highest on *Instagram* ($n = 236$; 61.1%), followed by *TikTok* ($n = 224$; 58.0%) and *YouTube* ($n = 157$; 40.7%). Platforms such as *Facebook* ($n = 87$; 22.5%), *Snapchat* ($n = 81$; 21.0%), *WhatsApp* ($n = 53$; 13.7%), *Twitter* ($n = 25$; 6.5%), *BeReal* ($n = 17$; 4.4%), or other channels ($n = 1$; 0.3%), were less often selected by participants as channels on which they often see risky social media challenges.

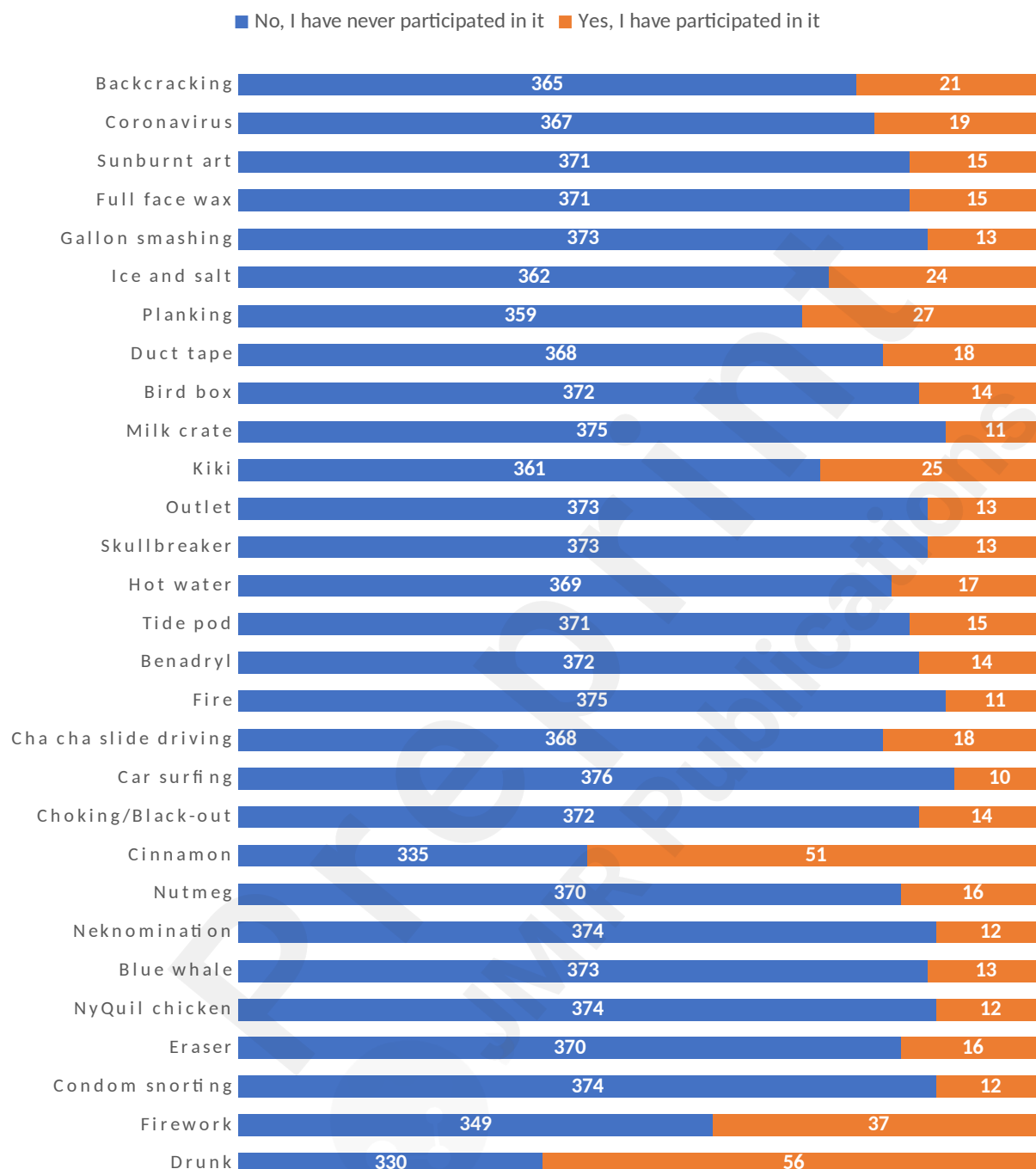
Third, when examining *who* posts these challenges, participants indicated that this is most often done by people unknown to them ($n = 275$; 71.2%), followed by people that participants follow but with whom they do not have a direct personal relationship (e.g., influencers or celebrities, $n = 139$; 36.0%). Only sometimes do participants come across challenges posted by people they follow and with whom they also have a personal relationship ($n = 40$; 10.4%).

Finally, when examining participants' participation in risky social media challenges, results showed that quite a few participants indicated to have participated in at least one of the risky social media challenges ($n = 134$; 34.7%). These participants participated in one ($n = 58$), two ($n = 23$), three ($n = 13$), or four ($n = 10$) challenges. The top three challenges that were most often participated in were the Drunk Challenge ($n = 56$), the Cinnamon Challenge ($n = 51$), and the Firework Challenge ($n = 37$). Figure 2 depicts an overview of the participation for each pre-listed risky social media challenge.

Follow-up questions showed that (among participants who indicated having participated in a pre-listed risky social media challenge; $n = 134$), most reported to have not posted it on social media ($n = 120$). Furthermore, most indicated that they did not try to persuade others (i.e., 'not at all' [$n = 56$], 'not' [$n = 23$], 'neutral' [$n = 38$], 'a little' [$n = 11$], 'a lot' [$n = 6$]).

Fig. 2 Participation in Risky Social Media Challenges ($N = 386$)

Participation in risky social media challenges (N = 386)

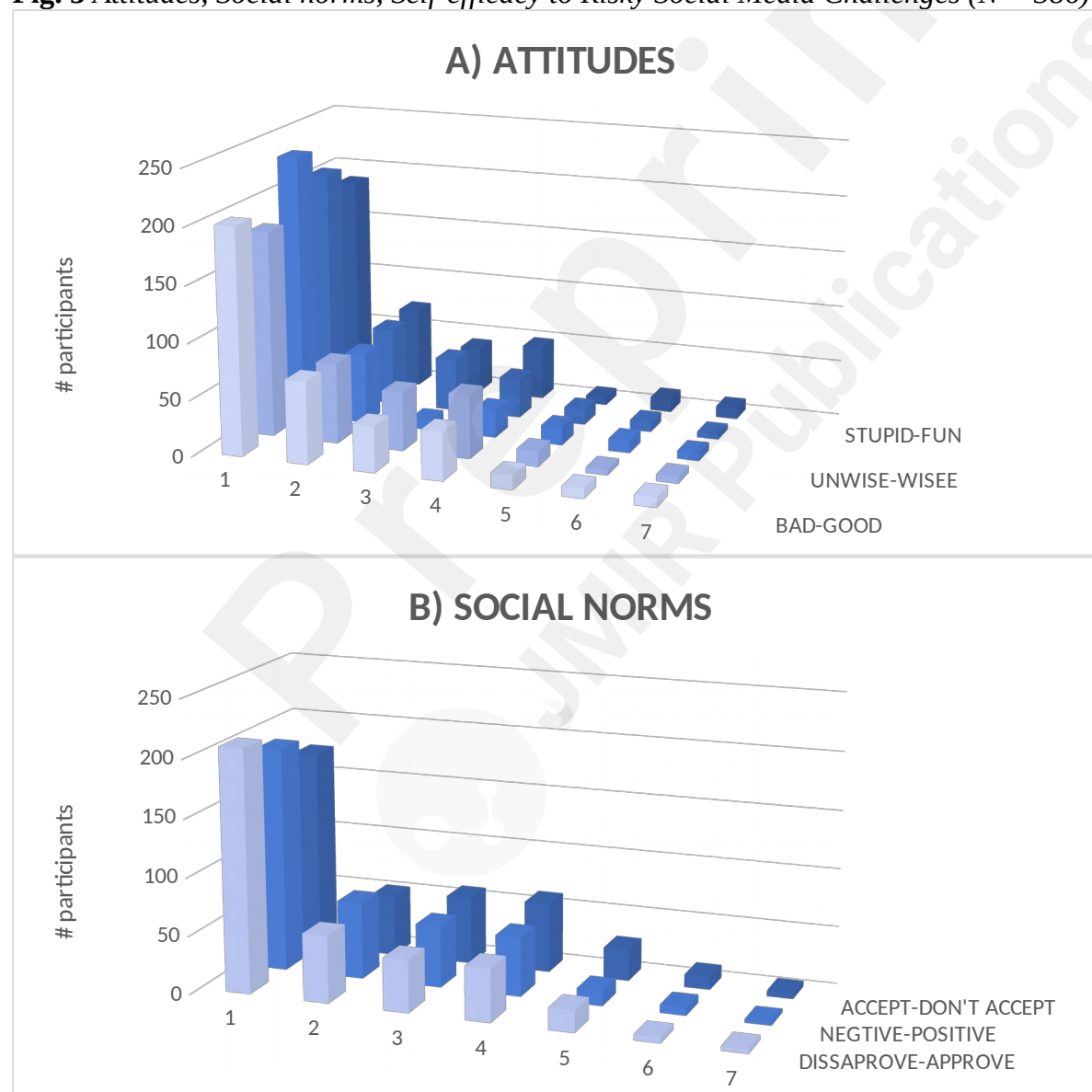


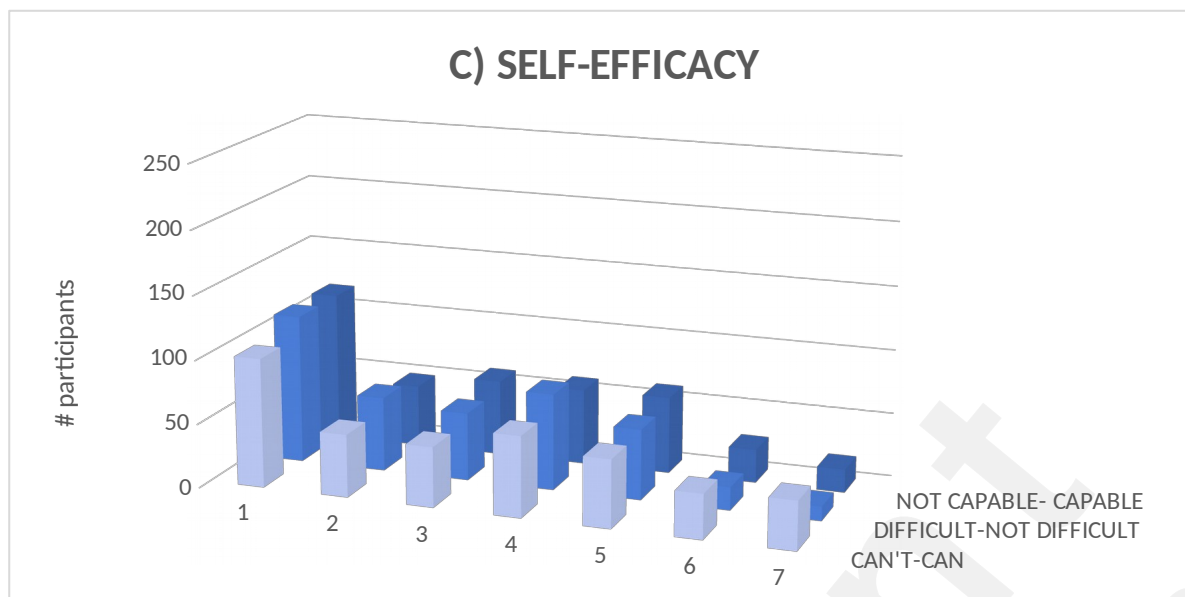
Aim 2: Evaluation of Risky Social Media Challenges

First, when examining participants' *attitudes* towards risky social media challenges, results participants indicated having negative attitudes toward risky social media challenges ($M = 2.21$, $SD = 1.34$; Figure 3a). Second, when examining *social norms* regarding risky social media challenges, participants stated expecting other people in their social network to evaluate risky social media

challenges negatively ($M = 2.19$, $SD = 1.36$; Figure 3b). Third, when examining participants' *self-efficacy*, results showed that participants were neutral on whether they would be able to participate in these challenges themselves ($M = 3.19$, $SD = 1.72$; Figure 3c). Fourth, considering *intentions* to participate, results showed that participants having relatively low intentions to participate in a risky social media challenge in the future ($M = 1.66$, $SD = 0.92$). Finally, when examining *intentions of others*, participants indicated that they think it is unlikely that people from their social network would participate in risky challenges ($M = 2.20$, $SD = 1.51$).

Fig. 3 Attitudes, Social norms, Self-efficacy to Risky Social Media Challenges ($N = 386$)





Note: Each category corresponds to a separate question

Discussion

The current study aimed to gain insight into risky social media challenges, specifically in young people's exposure to, participation in, and evaluation of these challenges. The results reveal three main findings. First, many young people are exposed to risky social media challenges, most often via *Instagram* and *TikTok* and posted by people not directly known to them. Second, although participation in challenges was lower than exposure rates, more than one-third of participants indicated to have participated in a challenge. However, most participants indicated not to post this on social media or convince others to join them. Third, evaluations of participants (attitudes, social norms, and intentions (of others) regarding risky social media challenges were relatively negative.

The first main finding of young people being exposed to risky social media challenges is in line with other studies on specific social media challenges (such as the Kiki challenge, the Blue Whale challenge, and the Cinnamon challenge ^{7,8,27}. The striking percentage of 86.3% of young people who are exposed to these risky challenges is worrisome. Young people indicated to mainly encounter risky challenges on *Instagram* and *TikTok*, which is partly in line with studies highlighting the role of *TikTok* ¹⁰. However, these results also suggest a shift in popularity and content of various platforms. Whereas *YouTube* used to be the main platform studied regarding risky challenges ²⁸, shorter video's on *TikTok* and *Instagram* have recently been gaining popularity ^{29,30}. This appears to

be reflected in our results. It is important for future research to follow these trends and continually include the most popular social media platforms in studies of risky social media challenges. Furthermore, youth indicated the challenges they saw originated not from friends or people familiar to them, but from people who were unknown to them or from people they followed but with whom they did not have a direct relationship. The latter category can reflect celebrities or social media influencers, but the first category still remains somewhat of a black box. Who exactly are featured in these videos? Are these videos suggested by the platforms' algorithms? Are all participants equally exposed to videos from strangers? And would effects differ when distinguishing between different sources? Such questions are relevant for future research.

The second main finding, that more than one-third of the individuals had participated in a social media challenge that might be harmful to them, is striking and in line with previous literature⁴. Luckily, most individuals indicated that, although they participated in a risky challenge, they often did not post this on social media or encourage others to participate. A hopeful consequence of this may be that this impedes the spread of risky social media challenges.

The third main finding shows that young people evaluated the challenges with negative attitudes, social norms, and intentions (of others). This is rather surprising given the participation rates. In line with the theory of planned behavior, one could expect attitudes and intentions to be related to actual behaviors²⁴. A potential explanation for this discrepancy may be that exposure and sharing of social content is not always done in a very deliberate manner. For example, a study on other risky social media content (i.e., alcohol-related posts) showed that young people are often unaware of their sharing behavior³¹. It is therefore possible that even though young people indicate explicit negative attitudes, they are implicitly more positive towards engaging in the behavior. Prevention efforts should therefore not only focus on preventing exposure to risky content, which remains difficult due to the complexities of detecting newly arising challenges in time, but also on empowering young people to make wise decisions when coming into contact with these challenges.

Therefore, the topic of risky challenges should be included in social media literacy programs aimed at youth. To do so effectively, research on unique features of challenges and more specific information on health outcomes can be a future research avenue to guide regulation and prevention.

A limitation of this study includes asking about the exposure to risky social media challenges through self-report. Although we tried to help participants remember challenges by providing detailed descriptions of them, it is still possible that they forgot certain challenges that they were exposed to. As a consequence, we believe the percentage of participants exposed to risky challenges might be an underestimation of the actual population percentage. Future research could try to use more objective measures to obtain exposure rates (e.g., through automatic coding of online content, or by data donation studies).

To conclude, this study shows that young people are often exposed to risky social media challenges (especially via *Instagram* and *TikTok* by people unknown to them) and that a fair share of them also participated in these challenges. Interestingly, evaluations of these risky challenges are negative but some youths do participate in them. More research on this discrepancy is needed and prevention or regulation of this rising phenomenon with potentially harmful consequences is warranted.

Aknowledgments:

None.

Conflicts of Interest:

None declared.



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