

*Article*

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**Does the Platform Matter?**

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**Exploring the Relationship Between  
Cannabis-Related Content on Social Media,  
Sensation Seeking, and the Intention to Try  
Cannabis****Alice Binder** 

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**Abstract**

Cannabis is one of the most common substances consumed among adolescents and research demonstrates that exposure to cannabis-related content online is associated with cannabis consumption. However, little is known about the relationship between exposure on different social media platforms and the role of personal characteristics such as sensation seeking. We conducted a cross-sectional study among 1,309 adolescents between 15 and 19 years old in Switzerland investigating the relationship between exposure to cannabis-related content on Instagram, Snapchat, and TikTok and the intention to consume cannabis. Results suggest a positive link between exposure to cannabis-related content on Instagram and the intention to consume cannabis. No such link emerged regarding Snapchat or TikTok. Additionally, we found a positive relationship between adolescents' sensation seeking and the intention to consume cannabis. Moreover, we found that high sensation seekers' exposure to cannabis-related content on Snapchat is positively related to the intention to consume cannabis. In sum, this study shows that not only the platform matters when discussing the effects of cannabis-related online content but also personal characteristics such as sensation seeking.

**Keywords**

Cannabis, social media, adolescents, sensation seeking.

Cannabis is one of the most common substances consumed among adolescents worldwide (Duncan et al., 2015). While tobacco and alcohol consumption rates in adolescents

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have been steady in recent years, cannabis consumption rates have been increasing (European Monitoring Centre for Drugs and Drug Addiction, 2017). Cannabis consumption comes with many social and psychological risks (World Health Organization, 2016), such as decreased cognitive functions or lower life satisfaction (Hasin, 2018). Not only are adolescents particularly affected by these consequences (Wilson et al., 2019), studies have shown that early cannabis consumption increases the likelihood of addictive behaviour later in life (Silins et al., 2014; Winters & Lee, 2008). Therefore, a better understanding of the causes behind cannabis consumption onset among young people is of great interest regarding health prevention.

There exist of course many factors which have already been associated with this health risk behaviour. The social environment is recognised as a major factor impacting individual health risk behaviours such as cannabis consumption. Because peer orientation is particularly present in adolescents (Koepke & Denissen, 2012), it is not surprising that adolescents' social context plays a crucial role regarding health-related beliefs and engagement in health risk behaviours (Henneberger et al., 2021; Knoll et al., 2015).

Based on the cognitive social theory (Bandura, 2004), people might also model behaviours which they observe in different media formats. In that regard especially, social media networks seem important, since studies reveal that adolescents frequently retrieve information about health risk behaviours from different social media platforms (Bilgri et al., 2021). Moreover, content analyses showed that the consumption of cannabis is presented in a positive light in adolescents' online environment (Park & Holody, 2018; Rutherford et al., 2022). Therefore, it comes with no surprise that exposure to cannabis-related content on social media is found to be associated with a higher likelihood of consuming cannabis in adolescents (Cabrera-Nguyen et al., 2016; Roditis et al., 2016). However, little is known about the effects of cannabis-related content on different social media platforms. This seems highly important because different social media platforms are used for different purposes in adolescents (e.g., Bucknell Bossen & Kottasz, 2020; Vranken et al., 2020) and might entail different effects on adolescents' cannabis consumption.

According to the Differential Susceptibility to Media Effects Model (DSMM; Valkenburg & Peter, 2013), some individuals are more susceptible for some media effects. While studies concluded that personal traits such as the level of sensation seeking (Sargent et al., 2010) might influence the likelihood of conducting a health risk behaviour (Geusens et al., 2020), no study has investigated the role of this personality trait in connection with exposure to cannabis-related content on different social media platforms.

Summarised, the present study contributes to the state of research by addressing two important aspects. On the one hand this study takes differences between social media platforms into account and investigates the effect of exposure related to cannabis-related content on the three most frequently used platforms among adolescents in Switzerland, being Instagram, Snapchat, and TikTok (Bernath et al., 2020; Frey & Friemel, 2023). On the other hand, this study investigates the relation of sensation seeking as one important personal trait, which might not only be associated with adolescents' behavioural intention to consume cannabis directly but also moderate the relationship between exposure to cannabis-related content on social media and the intention to consume cannabis in the future. We thus analyse a representative sample of adolescents between 15 and 19 years old in Switzerland regarding these factors.

## *Cannabis-Related Content on Social Media and the Intention to Consume Cannabis*

Social media platforms such as Instagram, Snapchat, and TikTok are ubiquitous in the everyday life of adolescents (Pew Research Center, 2018), affording them to perceive, address and connect with others online (Moreno et al., 2013). The crucial role of communication is reflected in both social cognitive theory (Bandura, 2004) and social normative approaches (Geber & Hefner, 2019), which emphasise that mediated communication affects the way behaviour is displayed and perceived, and in turn impacts individual behaviour. Thus, adolescents might also be affected by cannabis-related content in their social media environment.

Since adolescents spend much of their leisure time on social media (Pew Research Center, 2018), it comes with no surprise that adolescents frequently retrieve information about health risk behaviours from social media platforms (Bilgri et al., 2021). This is very concerning since research showed that online content related to health risk behaviour in general (Boyle et al., 2017), as well as cannabis consumption in particular (Park & Holody, 2018), is overwhelmingly portrayed in a positive light. Further research indicates that also adolescents are mainly exposed to content which shows positive aspects concerning consuming cannabis on social media platforms (Cavazos-Rehg et al., 2018).

While most studies are concerned with content related to alcohol consumption and to a lesser extent with content related to tobacco consumption (Vannucci et al., 2020), some studies indicate that the exposure to cannabis-related content normalises the consumption of cannabis (Jenkins et al., 2021), reinforces misconceptions about risks (Ishida et al., 2020), and might influence the likelihood of conducting this behaviour in adolescents (Cabrera-Nguyen et al., 2016; Roditis et al., 2016; Vannucci et al., 2020). With respect to limitations, it has to be noted that former studies were mainly concerned with the effects of cannabis advertisements online (e.g., D'Amico et al., 2016; Whitehill et al., 2020) and conducted in the US where in some states the consumption of cannabis is legalised (Johnston et al., 2017). In many countries cannabis consumption is illegal and therefore there is less risk of being exposed to cannabis advertisements online. Furthermore, while adolescents might be aware of the persuasive power of advertisements, they might show less reactance when being exposed to content from other social media users. Studies revealed that adolescents evaluate health risk behaviours more positively if their peers engage in such activities (Henneberger et al., 2021), that their beliefs and behaviours are affected by friends' attitudes (Ragan, 2016), and that the likelihood of their engagement in such behaviours increases with its occurrence in their social circle (Wang et al., 2016). When it comes to cannabis consumption among adolescents, the likelihood of conducting such a behaviour is also associated with the consumption behaviour in their environment in general (Brière et al., 2011) and the consumption in adolescents' friendship circles (Tucker et al., 2014).

Most importantly, still relatively little is known when it comes to the association between the exposure to cannabis-related content on different social media platforms and the intention to consume cannabis. Most of the studies do not compare or differentiate cannabis-related content on different social media platforms. Either a platform is in focus (Roditis et al., 2016), or social media is measured as an all-encompassing category (Cabrera-Nguyen et al., 2016).

Studies demonstrated that the use of these platforms differ significantly (Frey & Friemel, 2023). While Snapchat is mainly used for private and intimate conversations with close friends through ephemeral content, Instagram facilitates both following peers and public accounts

(e.g., celebrities or influencers) as well as the private and public display of content (Choi & Sung, 2018). TikTok, the fastest growing social media platform among adolescents (Bernath et al., 2020), on the other hand is seldomly used to connect with an existing network but rather to perceive and address strangers (Bucknell Bossen & Kottasz, 2020). These general differences between social media platforms also suggest different roles and effects with respect to substance related postings. For example, Boyle and colleagues (2017) found that undergraduate students seem to connect positive images about alcohol (i.e., glamorizing drinking) to the platform Instagram while content displaying negative consequences of consuming alcohol is connected to the platform Snapchat. Furthermore, Vranken and colleagues (2020) showed in a cross-sectional study that Snapchat use can be associated with binge drinking while this result was not found for Instagram.

In sum, different usage patterns and features of the platforms (Frey & Friemel, 2023; Vranken et al., 2020) suggest that effects of cannabis-related content might differ between platforms. However, no study investigated this important research gap. Thus, this study tries to narrow down which social media platforms lead to which effects and aims to answer the following first research question:

*RQ1:* How is exposure to cannabis-related content on a) Instagram, b) Snapchat, and c) TikTok associated with adolescents' intention to try cannabis?

### *The Moderating Role of Personal Dispositions*

In terms of personal dispositions, studies indicated that a persons' behaviour additionally depends on their personality, especially when being exposed to health risk behaviours of others. A central personal trait is sensation seeking, defined as the tendency to seek for stimulation with novel or intense behaviours or actions (Zuckermann, 1994). Sensation seeking has been found to predict both alcohol and tobacco consumption onset (Sargent et al., 2010) as well as the extent of cannabis consumption among adolescents (Crawford et al., 2003; Hampson et al., 2008; Kaynak et al., 2013). Therefore, we formulate the following hypothesis:

*H1:* The level of sensation seeking is positively associated with the intention to try cannabis.

No study has yet investigated the moderating role of sensation seeking when focusing on the association between exposure to cannabis-related content on different social media platforms and the intention to consume cannabis in the future. Based on the DSMM (Valkenburg & Peter, 2013), this seems highly important because not all content can be associated with the same intentions or behaviours for all media users. This means that under certain circumstances, media use can be associated with different intentions or behaviours (Geusens et al., 2020).

One study investigating the connection between sharing alcohol references and the intention to consume alcohol showed the strongest association among young adults with low levels of sensation seeking (Geusens et al., 2020). Since the authors investigated these effects with students who already had experiences with alcohol consumption, they conclude that this might be due to a desensitization of the behaviour. However, for social media users with less or even no experience with a health risk behaviour this effect might differ. In line with this, Geusens and colleagues (Geusens et al., 2019) studying a sample with low experiences with drinking alcohol found that high-risk individuals (i.e., high in sensation seeking) show the strongest association between sharing alcohol-related content online and alcohol consumption. Thus, for

people low in experience with health risk behaviours some kind of downward-spiral might apply (e.g., Geusens et al., 2020; Slater, 2007).

Based on the current empirical evidence (Hampson et al., 2008; Kaynak et al., 2013), one might expect that especially sensation seekers are more willingly to engage in health risk behaviour when being exposed to related content online. This could be particularly true for adolescents who have no prior experience with cannabis consumption (Geusens et al., 2019). Furthermore, these effects might again vary between investigated platforms. Since no study investigated the moderating role of adolescents' level of sensation seeking in this context, we refrain from formulating a hypothesis and pose a research question instead:

*RQ2:* How does the level of sensation seeking moderate the associations between the exposure of cannabis-related content on a) Instagram, b) Snapchat, and c) TikTok on adolescents' intention to try cannabis?

## Methods

### *Research Design*

The study was conducted in accordance with University of Zurich's ethical guidelines and was reviewed and approved by the Ethics Committee of the Faculty of Arts and Social Sciences of the University of Zurich (No. 21.4.7)<sup>1</sup>. Participants were recruited using the household register of the national statistical office of Switzerland that is updated quarter yearly. A stratified random sample of people between the ages of 15 and 19 living in Switzerland was drawn based on the distribution of age, gender, and region. Between May and July 2021, we invited 5,683 adolescents and young adults by mail to take part in the online survey (Frey & Friemel, 2023). In case of nonresponses, potential participants were reminded by mail, phone or E-Mail. Overall,  $N = 1,917$  participants took part via Computer Assisted Web Interviews, indicating a response rate of 33.7%. All participants gave informed consent.

### *Sample*

In a first step participants that were over 19 years old ( $n = 63$ ) or did not specify their gender ( $n = 17$ ) were excluded. Since the study focuses on adolescents' cannabis consumption onset, we omitted all adolescents that at least tried cannabis in the past ( $n = 528$ ) from the dataset. Thus, we arrived at a final sample of  $N = 1,309$  adolescents with an age range between 15 and 19 years ( $M = 16.7$ ,  $SD = 1.33$ , 57.4% female, 42.6% male). Regarding education, 19.8% of the participants are in compulsory education, 77.4% in upper secondary education and 2.8% in tertiary education (e.g., university).

## Measures

**Exposure to Cannabis-Related Content on Social Media.** We measured participants' exposure to cannabis-related content on Instagram, Snapchat and TikTok on a scale from 1 = *never* to 7 = *very often* ("How often do you see cannabis-related content on the following platforms/apps?"; Instagram:  $M = 1.87$ ,  $SD = 1.40$ , Snapchat:  $M = 1.63$ ,  $SD = 1.34$ , TikTok:  $M = 1.34$ ,  $SD = 0.91$ ). Participants indicating not to use a social media platform were recoded as never being exposed to cannabis-related content on the corresponding platform.

**Intention to Try Cannabis in the Future.** As a dependent variable, we measured participants' behavioural intention by asking for the probability of cannabis use in the near future on a 5-point Likert scale from 1 = *very unlikely* to 5 = *very likely* ("How likely is it that you will rarely consume or try the following things in the next 12 months?", [Cannabis]). Due to low variance, we decided to dummy-code this variable to 0 = *no intention to consume cannabis in the future* (former scale point 1), and 1 = *intention to consume cannabis in the future* (former scale points 2-5). Overall, 993 (75.9%) adolescents stated that they have no intention to consume cannabis in the near future and 288 (24.1%) stated the intention to try cannabis in the near future.

**Sensation Seeking.** As a moderator, we measured participants' level of sensation seeking following Stephenson et al. (Stephenson et al., 2003) and Vallone et al. (Vallone et al., 2007). Participants assessed four items on a 5-point Likert scale ranging from 1 = *doesn't apply at all* to 5 = *absolutely applies* (e.g., "I like doing risky things"; Cronbach's alpha = .74,  $M = 2.92$ ,  $SD = 0.93$ ). Drawing on the cut-off criteria by (Byrne, 2016), the model fit showed satisfactory results ( $\chi^2(2) = 12.62$ ,  $p < .001$ , CFI = .99, TLI = .98, RMSEA = .06, SRMR = .02). The factors loading ranging from  $\lambda = .61$  to .90.

**Control Variables.** First, we considered participants' age and gender. Second, we measured the frequency of Instagram, Snapchat, and TikTok use on a 7-point Likert scale ranging from 1 = *never* to 7 = *very often* and utilised the mean value to control for general social media use ( $M = 3.83$ ,  $SD = 1.75$ ). Third, we considered how participants assessed the prevalence of cannabis use among their friends with two questions using a scale with a slider ranging from *Nobody 0%* to *Everybody 100%*. They were asked to estimate "how many of their close friends regularly consume cannabis" ( $M = 16.2\%$ ,  $SD = 23.1\%$ ), and "how many of their friends seldomly consume cannabis or just gave it a try" ( $M = 27.0\%$ ,  $SD = 31.4\%$ ).

The zero-order correlations of the variables as well as the descriptive statistics of the variables used for the final analysis are presented in Table 1.

## Analysis Strategy

We calculated a non-stepwise logistic regression using the `lm` function in the statistical software R (version 4.2.1). We included the intention to consume cannabis in the future as the dependent variable and exposure to cannabis-related content on Instagram, Snapchat and TikTok as well as sensation seeking as the independent variables. Additionally, we included interaction effects of sensation seeking and exposure to cannabis-related content on Instagram, Snapchat, and TikTok. We controlled for gender, age, and the general frequency of social media use. Further we controlled for the perceived prevalence of regular cannabis consumption and the perceived prevalence of general experience among close friends. All relevant variables were mean-centered.

**Table 1.** Zero-Order Correlation and Descriptives of the Constructs in the Logistic Regression Analysis

Constructs	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Intention to consume cannabis	1.00									
2. Age	.05	1.00								
3. Sex (female)	.06*	-.00	1.00							
4. Regular cannabis consumption peers	.16**	.14**	-.03	1.00						
5. Experience cannabis consumption peers	.33**	.21**	-.04	.44**	1.00					
6. Social media use	.05	.04	.17**	.07*	.07*	1.00				
7. Sensation seeking	.20**	-.02	.08**	.08**	.16**	.18**	1.00			
8. Exposure to cannabis-related content on Instagram	.15**	.07*	.02	.25**	.17**	.18**	.18**	1.00		
9. Exposure to cannabis-related content on Snapchat	.12**	.04	.04	.25**	.18**	.28**	.24**	.44**	1.00	
10. Exposure to cannabis-related content on TikTok	.08**	-.04	.11**	.18**	.10**	.28**	.12**	.44**	.39**	1.00
Cronbach's alpha	-	-	-	-	-	-	.74	-	-	-
<i>M</i>	-	16.71	-	16.2	27.0	3.83	2.92	1.87	1.63	1.34
<i>SD</i>	-	1.33	-	23.1	31.4	1.75	0.93	1.40	1.34	0.91

\* $p < .05$ , \*\* $p < .01$ .

Before calculating the model, we tested the presence of collinearity. The data met the assumption of collinearity indicating that multicollinearity was not a concern ( $VIF < 10$ ,  $Tolerance > 0.1$ ). Furthermore, testing the calibration of the model the Hosmer-Lemeshow goodness of fit test showed a good fit of the model ( $\chi^2 = 6.42$ ,  $df = 8$ ,  $p = .600$ ).<sup>2</sup>

## Results

A summary of the results can be found in Table 2.

While the conditional effect of adolescents' exposure to cannabis-related content on Instagram on the intention to consume cannabis in the future was statistically significant ( $b = 0.17$ ,  $b^* = 0.24$ ,  $p = .007$ , [OR 1.12 (CI 1.05, 1.34)]), no such effects were observed for cannabis-related content on Snapchat ( $b = -0.01$ ,  $b^* = -0.02$ ,  $p = .829$ , [OR 0.99 (CI 0.86, 1.12)]), or TikTok ( $b = -0.04$ ,  $b^* = -0.03$ ,  $p = .698$ , [OR 0.96 (CI 0.80, 1.16)]; RQ1). Moreover, in line with the current empirical evidence adolescents' level of sensation seeking was positively associated with the intention to try cannabis in the future ( $b = 0.44$ ,  $b^* = 0.40$ ,  $p < .001$ , [OR 1.55 (CI 1.29, 1.85)]; H1). There were no significant interaction effects with regard to cannabis-related content on Instagram ( $b = -0.04$ ,  $b^* = -0.05$ ,  $p = .582$ , [OR 0.96 (CI 0.84, 1.11)]), or TikTok ( $b = -0.02$ ,  $b^* = -0.02$ ,  $p = .846$ , [OR 0.98 (CI 0.81, 1.19)]) with

adolescents' level of sensation seeking on adolescents' intention to consume cannabis in the future. However, the interaction effect of exposure to cannabis-related content on Snapchat and adolescents' level of sensation seeking reaching a significant level ( $b = 0.15$ ,  $b^* = 0.19$ ,  $p = .043$ , [OR 1.16 (CI 1.01, 1.35)]; RQ2). The nature of the interaction effect of exposure to cannabis-related content on Snapchat and sensation seeking on intention to try cannabis in the future is displayed in Figure 1.

Table 2. Logistic Regression Predicting Intention to Try Cannabis

Predictor	<i>b</i>	<i>SE</i>	<i>z</i>	<i>p</i>
Age	-0.01	0.06	-0.14	.886
Sex (female)	0.27	0.16	1.71	.088
Regular cannabis consumption peers	0.00	0.04	0.03	.978
Experience cannabis consumption peers	0.22	0.02	8.72	< .001***
Social media use	-0.02	0.05	-0.43	.667
Sensation seeking	0.44	0.09	4.78	< .001***
Exposure to cannabis-related content on Instagram	0.17	0.06	2.70	.007**
Exposure to cannabis-related content on TikTok	-0.04	0.09	-0.39	.698
Exposure to cannabis-related content on Snapchat	-0.01	0.07	-0.22	.829
Cannabis content Instagram x Sensation seeking	-0.04	0.07	-0.55	.582
Cannabis content TikTok x Sensation seeking	-0.02	0.10	-0.19	.846
Cannabis content Snapchat x Sensation seeking	0.15	0.08	2.02	.043*

Note. *b* represents the unstandardised *b* coefficient. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

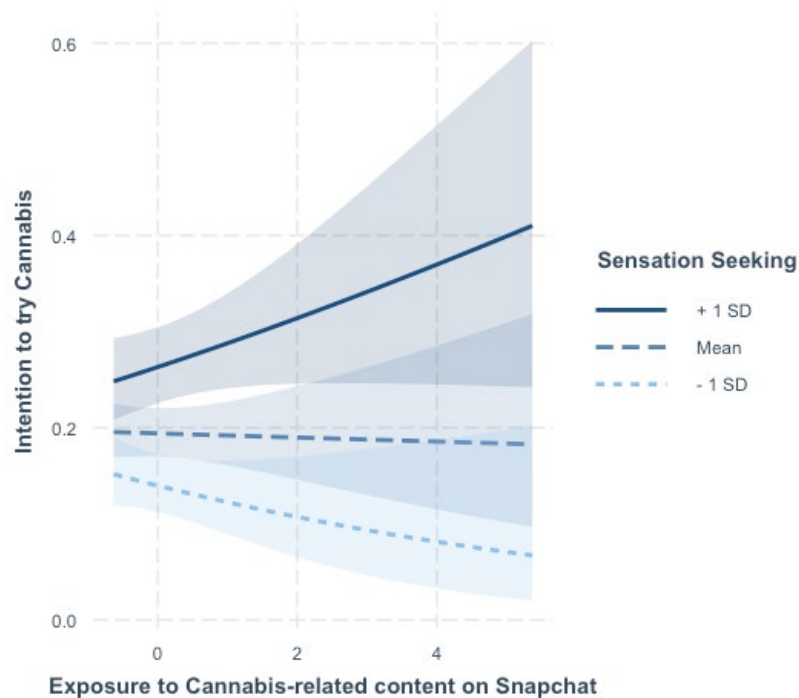


Figure 1. Interaction Effects of Adolescents' Exposure to Cannabis-Related Content on Snapchat and Sensation Seeking on the Intention to Consume Cannabis



The interaction effect showed that the effect of exposure to cannabis-related content on Snapchat on the intention to try cannabis was positive if adolescents' level of sensation seeking was high. We examined the Johnson-Newman table to investigate at what level of sensation seeking this positive interaction effect occurs. The results showed that, on a high level of sensation seeking (above 4.12 on a 5-point scale<sup>3</sup>), the effect of exposure to cannabis-related content on Snapchat on the intention to try cannabis in the future is significantly positive.

Furthermore, we found a direct effect of peers' experience with cannabis consumption and the intention to try cannabis in the future ( $b = 0.22$ ,  $b^* = 0.68$ ,  $p < .001$ , [OR 1.24 (CI 1.18, 1.31)]). No other effects with regard to the control variables occurred.

## Discussion

Cannabis consumption in adolescents is recognised as a problematic health risk behaviour (Wilson et al., 2019). Based on the theoretical assumptions of the social cognitive theory (Bandura, 2004), it can be assumed that content on social media platforms shape adolescents' perception and consumption of this substance (Cabrera-Nguyen et al., 2016; Reditis et al., 2016; Vannucci et al., 2021). This study is contributing to this research field by investigating a) different social media platforms separately, and b) the influence of one important individual susceptibility factor, sensation seeking (Crawford et al., 2003; Hampson et al., 2008; Kaynak et al., 2013).

Drawing on a sample of 1,309 adolescents, and answering our first research question, this study showed a positive association between cannabis-related content on Instagram and the intention to consume cannabis in the future. No such effects were found regarding cannabis-related content on Snapchat, or TikTok. This might be due to the different usage of and content on these three social media networks (Vanherle et al., 2022). On Snapchat users are mainly exposed to content from private conversations among close friends (Piwek & Joinson, 2016). Due to this private nature of perceived content adolescents are primarily exposed to content which they are already familiar from their offline interactions. Thus, online exposure is unlikely to have an additional effect. Moreover, studies concerning alcohol-related posts showed that content on Snapchat displays mainly negative consequences of consuming alcohol (Boyle et al., 2017). This might be also true regarding cannabis-related content which might explain the non-significant relationship between cannabis-related content on Snapchat and the intention to try cannabis in the future. Contrary TikTok can be described as a public platform and is often used to follow people that do not belong to one's everyday contacts (Bucknell Bossen & Kottasz, 2020). Thus, most users do not have a close relationship with the people who are posting content on this platform. Therefore, cannabis-related content on TikTok can be assumed to be less persuasive. Instagram, on the other hand combines the characteristics of these two platforms and users see content from peers as well as famous persons, such as celebrities and influencers. Due to this diverse audience, it can be assumed that people are more likely to share behaviours which are evaluated as being appropriate for a broader audience (Vranken et al., 2020). Thus, users are exposed to rather aesthetic and positive content on Instagram (Schreiber, 2018). Furthermore, one study on alcohol-related content argues that due to its public nature it is more likely that on Instagram mainly positive aspects of substance use are presented (Hendriks et al., 2018). Therefore, a combination of mainly positive cannabis-related content from peers as well as adored protagonists, might explain this positive

relationship between exposure to cannabis-related content on Instagram and the intention to try cannabis in adolescents. Thus, the different usage of these platforms in adolescents might explain the different effects (Vanherle et al., 2022). However, needless to say, more research is warranted to classify these results properly. Especially, content analyses which focus on the differences between the cannabis-related content on these three social media platforms might lead to an insightful explanation for the revealed effects in this study. Since social media platforms display highly personalised newsfeed new methodological approaches are necessary to study the nature of this effect.

Furthermore, as expected and also as assumed in our first hypothesis, we found a positive relationship between the level of adolescents' sensation seeking on the likelihood of consuming cannabis in the future. This result is in line with the current empirical evidence (Hampson et al., 2008; Sargent et al., 2010; Yanovitzky, 2005) which already showed that the level of sensation seeking is a predictor for cannabis consumption. To explore the moderating role of sensation seeking in more detail and answer our second research question, we investigated interaction effects between adolescents' level of sensation seeking and the exposure to cannabis-related content on Instagram, Snapchat, and TikTok on adolescents' intention to consume cannabis in the future. The results showed a positive relationship between the level of sensation seeking and exposure to cannabis-related content, but only for content on Snapchat. Thus, for high sensation seekers cannabis-related content on Snapchat can lead to the intention to consume cannabis in the future. No such effects occurred with regard to cannabis-related content on Instagram or TikTok. Studies showed that the affiliation with deviant peers is connected with adolescents' cannabis consumption (Yanovitzky, 2005). Furthermore, people who can be categorised as high sensation seekers connect more frequently with deviant peers that lead to novel and non-normative stimulation (Caspi et al., 2005). Due to the more intimate use of Snapchat (Piwek & Joinson, 2016), one might argue that sensation seekers are more likely to be connected with deviant peers on this platform and therefore particularly stimulated with cannabis-related content, ultimately leading to a higher intention to consume cannabis in the future. Due to the public nature of Instagram and TikTok this stimulation might not be possible or at least not that intense on the other platforms. Also in line with this reasoning, studies argued that due to the private nature it is more likely that users share problematic substance use, such as problematic drinking behaviours, on Snapchat (Vranken et al., 2020; Hendriks et al., 2018). Since cannabis consumption is illegal in Switzerland, especially for sensations seekers this content might be appealing. However, more insights are needed regarding the actual content of cannabis-related content on Instagram, Snapchat, and TikTok.

While former studies tend to only investigate overall exposure effects of cannabis-related content on social media in general (e.g., Reditis et al., 2016), this study for the first time in extant research focused on three different social media platforms. In line with studies focusing on alcohol-related social media content (e.g., Vranken et al., 2020), the results demonstrated that this differentiation is necessary since the effects were different depending on the social media platform. While the technical features of the different platforms seem to be quite similar, adolescents seem to use the platforms to fulfil different needs (Vanherle et al., 2022). Therefore, empirical studies as well as theories in this area of research should take the different use of this platforms into account. This may include such dimensions as the relation of the users to those who post (e.g., close friends vs. loose contacts vs. strangers vs. celebrities), the setting of other followers (e.g., circle of friends vs. loose network vs. public), the style of the content

(e.g., spontaneous vs. staged), or the persistence of posts (e.g., ephemeral vs. durable). Furthermore, as also suggested by the DSMM (Valkenburg & Peter, 2013), effects might depend on users' individual susceptibility factors. Future research should also take different personality traits into account since the same content might lead to different effects depending on adolescents' personality. Thus, from a theoretical perspective, our study supports the notion to overcome simple stimulus-response approaches when studying the effects of cannabis-related content on different social media platforms and incorporate personal traits which might make individuals more or less susceptible for specific media content (Geusens et al., 2020).

### *Limitations*

While this study makes important contributions to the literature on social media effects regarding content related to health risk behaviours, it also has its limitations. First, we used self-reported data and a bias of response cannot be ruled out, especially with regard to the dependent variable representing an illegal behaviour in Switzerland. However, since we focused on the intention to consume cannabis in the future social desirability might be less of an issue in this study. Related to this and similarly to most research examining health risk behaviours (Geusens et al., 2020), we have to maintain caution when interpreting the results because an intention-behaviour gap might be present. Not all adolescents indicating an intention will in fact consume cannabis, while adolescents without intention may consume cannabis. Furthermore, a certain recall bias might be an issue in this study with regard to cannabis-related content on different social media platforms (Whitehill et al., 2020). Thus, further studies should also investigate the actual content regarding cannabis representations on different social media platforms.

Second, we relied on a cross-sectional design which does not allow to identify causal relationships. It might be possible that adolescents who show a higher likelihood of consuming cannabis in the future are also exposed to more cannabis-related content on different social media networks. However, given that other studies have found empirical evidence for the suggested causal direction for other substances (e.g., Geber et al., 2021), it is likely that this holds also true for cannabis.

Third, we did neither measure the valence of the cannabis-related content on social media nor the sources of the content. Based on the current empirical evidence we base our conclusions on the assumption that most of the content is either neutral or positive (Cavazos-Rehg et al., 2018). However, further studies should focus more specifically on the actual content adolescents are exposed to.

### *Conclusion*

This study is among the first in this area of research which distinguishes between different social media platforms regarding cannabis-related content on adolescents' intention to consume cannabis in the future. This study reveals that not all social media platforms show the same exposure effects on adolescents. For further research it seems especially important to focus on the content of these platforms to reveal why these different effects occur. Furthermore, future studies should keep in mind that different personality traits such as the level of sensation seeking can influence the reactions to cannabis-related content on different social media platforms. Thus, the same content might lead to different effects depending on ones' individual susceptibility factors.

## Notes

1. The study was conducted in a country in which cannabis use is illegal (Federal Act on Narcotics and Psychotropic Substances, 2022).
2. Calculating a confusion matrix, the sensitivity showed a value of .23, the specificity of .95 and the miscalculation error of .21.
3. In this study, 13.7% of the sample showed a mean above the cut-off point of 4.12.

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## Ethical Approval

The study was conducted in accordance with the University of Zurich's ethical guidelines and was reviewed and approved by the Ethics Committee of the Faculty of Arts and Social Sciences of the University of Zurich (No. 21.4.7).

## Conflict of Interest

No conflict of interest exists.

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