

More time spent on social media correlates to greater self-assessed risk-taking behaviour in the outdoors

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Abstract

Background: There is growing awareness of the broader health-related harms of social media, yet research on social media-related injury mortality and morbidity remains limited. Emerging evidence suggests links between excessive social media use and increased risks of self-harm, cyberbullying-related distress, and dangerous viral challenges but there has been limited research on the link between time spent on social media and environmental risk taking, such as risky selfies. However, comprehensive epidemiological studies and policy-driven interventions remain scarce, highlighting the need for further investigation into the public health implications of digital engagement.

Objective: This research aimed to examine the relationship between self-reported time spent on social media, influencer status, and risk-taking behaviours among Australians, considering implications for injury prevention.

Methods: Via a national cross-sectional survey of Australian social media users (n = 509) participants reported their average daily time spent on social media, whether they identified as a social media influencer, and if they had ever engaged in risk-taking behaviour to create social media content. Chi-square and t-tests were conducted to explore associations.

Results: Among participants, 9.4% self-reported engaging in risk-taking behaviour in the outdoors. Influencers were significantly more likely to report risk-taking (48.3%) compared to non-influencers (4.4%) ($\chi^2 = 110.57$, $p < 0.001$). Risk-takers also spent significantly more time on social media ($M = 2.05$, $SD = 1.04$) compared to non-risk-takers ($M = 1.37$, $SD = 1.04$), $t(57.22) = 4.31$, $p < 0.001$.

Conclusions: Interventions such as real-time alerts, pop-up warnings, and geolocated safety information may help curb risky behaviours among social media users, particularly influencers and heavy users. Social media platforms and policymakers should collaborate to promote safer behaviours and raise awareness about the risks associated with creating content. Targeted interventions for heavy social media users, and those that consider themselves social media influencers are required to reduce risky behaviours that may lead to injury in outdoor settings.

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More time spent on social media correlates to greater self-assessed risk-taking behaviour in the outdoors

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Abstract

Background: There is growing awareness of the broader health-related harms of social media, yet research on social media-related injury mortality and morbidity remains limited. Emerging evidence suggests links between excessive social media use and increased risks of self-harm, cyberbullying-related distress, and dangerous viral challenges but there has been limited research on the link between time spent on social media and environmental risk taking, such as risky selfies. However, comprehensive epidemiological studies and policy-driven interventions remain scarce, highlighting the need for further investigation into the public health implications of digital engagement.

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WHAT IS ALREADY KNOWN ON THIS TOPIC

- Risky behaviours for social media content creation, such as extreme selfies and dangerous activities, have resulted in injuries and fatalities worldwide.
- While social media platforms amplify risky content through algorithms, the role of time spent on social media and influencer status in driving these behaviours has been underexplored.

WHAT THIS STUDY ADDS

- This study investigates the proportion of Australian social media users who report engaging in risk-taking behaviours for content creation.
- It explores the relationship between time spent on social media, influencer status, and self-reported risk-taking behaviours in outdoor settings.
- It highlights significant associations, such as influencers being 11 times more likely to report risk-taking and risk-takers spending significantly more time online.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

- Findings can inform injury prevention strategies by targeting high-risk groups, such as influencers and heavy social media users, with tailored education and intervention campaigns.
- Results emphasise the need for collaborations between social media platforms, public health experts, and policymakers to reduce the promotion of risky behaviours.
- Insights can help land managers and tourism authorities implement enhanced safety measures at "social media hotspots" to mitigate risks for visitors.

Introduction

The rise in social media use has impacted human behaviour, including outdoor activities. One notable change driven by smartphone and social media use is the increasing tendency to take photographs and selfies in risky outdoor settings (1). While most selfies and photographs are harmless, the pursuit of visually engaging content for social media has led some individuals to take significant risks, often in hazardous locations such as cliffs, waterfalls, and other remote areas (2). This phenomenon, fuelled by social media platforms' algorithmically driven reward systems (likes, comments, and increased visibility) has emerged as a public health concern, resulting in injuries and deaths (3,4).

Previous research has highlighted the link between social media-driven risk-taking and injury, particularly in the context of extreme selfies and dangerous outdoor activities (5,7,8). Studies suggest that social media engagement reinforces risky behaviours through social validation mechanisms (1), yet the specific role of time spent on social media and influencer status in driving these behaviours has remained underexplored.

This study is the first to specifically investigate the relationship between time spent on social media, influencer status, and self-reported risk-taking behaviour in outdoor environments. Understanding these relationships is critical for developing targeted interventions that address the underlying social and psychological drivers of risky behaviours for content creation.

Methods

Ethics Approval

This study involved human participants and was approved by the UNSW Sydney Human Research Ethics Committee (Project number HC230479). Participants gave informed consent to participate in the online survey.

Study Design and Setting

This study employed a cross-sectional, self-report survey design to investigate social media use and risk-taking behaviours in outdoor and recreational settings. The survey was administered online using the Dynata panel survey platform, which provided a representative sample based on age, sex and geographical location (N=509). Data collection occurred from 26 October-2 November 2023.

Participants and Recruitment

Participants were eligible if aged 18 years or older, resided in Australia, and used a social media platform. Compensation was provided by Dynata in accordance with their standard incentive structure, independent of the research team.

Survey Measures

The wider survey included a combination of closed- and open-ended questions, focusing on risk taking in the outdoors instigated by social media use. The survey also assessed norms, intentions, and perceived risk-taking behaviour underpinned by the Theory of Planned Behaviour (2).

This study concentrates on three survey questions, in addition to participant demographics:

1. Time Spent on Social Media: Participants reported their average daily time on social media, selecting from predefined categories (Less than 30 minutes, 30 minutes to 1 hour, 1 to 2 hours, 2 to 3 hours, More than 3 hours).
2. Influencer Status: Participants were asked if they identified as social media influencers (Yes/No).
3. Risk-Taking Behaviour: Participants reported whether they had ever engaged in risk-taking behaviour specifically to create social media content (Yes/No).

Analysis

Variables were recoded for consistency, including the conversion of categorical variables (e.g., "Less than 30 minutes") into numerical formats (e.g., 0.5 for "Less than 30 minutes"). Analyses were conducted in R (version 2024.09.0+375; R Core Team, 2024) with `dplyr` for data manipulation, `ggplot2` for visualisations, and `tidyr` for data cleaning. Summary statistics (means, standard deviations, and frequencies) were calculated for all key variables. Chi-Square Test were used to assess the association between influencer status and risk-taking behaviour. A t-test was used to compare mean time spent on social media between self-determined risk-takers and non-risk-takers.

Results

The survey had a total of 509 respondents (Mean age = 45.9, SD = 16.8). In total, 256 (50.3%) identified as female. Just over 10% (11.4%, n=58) considered themselves social media

influencers. Participants reported spending an average of 1.43 hours (SD = 1.06) per day on social media. Among the sample, 9.43% (n = 48) reported having taken risks to create social media content. A significant association was also found between age and risk-taking behaviour ($\chi^2 = 62.61$, $p < 0.001$), with younger participants being more likely to report engaging in risk-taking. The proportion of participants engaging in risk-taking was highest among those aged 18-24 (32.3%) and progressively declined with age, with only 1.2%-1.3% of individuals aged 55 and older engaging in such behaviour. Gender differences in risk-taking behaviour were also statistically significant ($\chi^2 = 4.30$, $p = 0.038$). Males (12.5%) were significantly more likely to report engaging in risk-taking behaviour compared to females (6.6%). A chi-square test revealed a significant association between identifying as a social media influencer and reporting risk-taking behaviour ($\chi^2 = 110.57$, $p < 0.001$). Cross-tabulation showed that 48.3% (n = 28) of influencers reported risk-taking, compared to only 4.4% (n = 20) of non-influencers (Table 1). An independent samples t-test demonstrated that participants who reported risk-taking behaviour spent significantly more time on social media (M = 2.05, SD = 1.04) compared to those who did not report risk-taking (M = 1.37, SD = 1.04), $t(57.22) = 4.31$, $p < 0.001$.

Table 1. Chi-Square and T-Test Analysis of Risk-Taking Behaviour by Age, Gender, Influencer Status, and Social Media Usage

Variable	Category	No risk taking (%)	Yes risk taking (%)	X ² , df, (p value)
Age Group (years)	18-24	44 (67.7)	21 (32.3)	X ² = 62.607, df = 5, (p < 0.001)
	25-34	76 (84.4)	14 (15.6)	
	35-44	87 (90.6)	9 (9.4)	
	45-54	90 (97.8)	2 (2.2)	
	55-64	80 (98.7)	1 (1.3)	
	≥65	84 (98.8)	1 (1.2)	
Gender	Male	218 (87.5)	31 (12.5)	X ² = 4.300, df = 1, (p = 0.038)
	Female	239 (93.4)	17 (6.6)	
	Other/Prefer not to say*	4 (100)	0	-
Influencer Status	Yes (Influencer)	30 (51.7)	28 (48.3)	X ² = 110.574, df = 1, (p < 0.001)
	No (Non-Influencer)	431 (95.6)	20 (4.4)	
Average Daily Time	< 30 min	99 (99)	1 (1)	X ² = 23.201, df =
	30 min - 1 hr	135 (92.5)	11 (7.5)	

Spent on Social Media	1 - 2 hrs	118 (91.5)	11 (8.5)	4, ($p < 0.001$)
	2 - 3 hrs	53 (79.1)	14 (20.9)	
	>3 hrs	56 (83.5)	11 (16.4)	

Discussion

This study provides important insights into the associations between social media use, influencer status, and risk-taking behaviours, with implications for injury prevention strategies in outdoor settings. The strongest statistical finding shows that risk-taking behaviour for social media is significantly more prevalent among younger individuals, particularly those aged 18-24. This aligns with existing literature on developmental psychology, where younger adults are known to exhibit greater sensation-seeking tendencies (3,4). Public health interventions should therefore focus on younger demographics, where risk perception and decision-making processes are still developing.

Social media influencers and individuals who self-reported greater average daily time on social media were also significantly more likely to engage in risk-taking behaviours for content creation. Such behaviours, which can include climbing cliffs (5), entering unsafe waters, or ignoring safety warnings, may elevate the risk of injury or death when in the outdoors (6).

Gender differences in risk-taking were also observed, with males being significantly more likely to report engaging in risky behaviours for social media. This is consistent with past research suggesting that men, on average, tend to take more risks, particularly in outdoor and physically demanding settings (7). Future research should seek to understand the effect size of social media on risk taking and gender.

Social media has been characterised as addictive, with research suggesting that its design leverages psychological mechanisms such as variable reward schedules, social validation, and engagement-driven algorithms to encourage prolonged use (8) as well as platform business models strategically designed to maximize user engagement, thereby encouraging prolonged and frequent use (9).

Our findings indicate a strong association between social media use and risk-taking behaviours in outdoor settings. While we cannot establish a direct causal relationship, the correlation suggests that

increased exposure to social media content may shape users' willingness to take risks for engagement and recognition. The link between time spent on social media and changes in behaviour has been well researched in the domains of wellbeing, mental health and anxiety (1,10,11). Studies often find no strong relationship and inconclusive results (11).

Our study is novel in that it directly asks social media users to self-assess whether they engage in risk-taking behaviours in outdoor settings. The perception of one's behaviour as risky may be influenced by societal norms and the extent to which individuals believe others perceive their actions as hazardous (12). In contrast, previous studies on social media impacts have primarily focused on subjective well-being, a construct that may be less dependent on external perceptions and more intrinsically determined (13,14).

In addition to high social media use, influencer status was also found to be strongly associated with increased risk-taking behaviours. Influencers often set trends that emphasise visually captivating content, which can encourage followers to replicate risky activities to achieve similar online recognition (15).

These trends have significant implications for injury prevention efforts. Social media plays a critical role in shaping peer norms and pressures, particularly among young adults and impressionable users (16,17). Addressing this issue requires interventions that directly target the influence of social media on behavioural norms; perhaps also the influence of the influencer.

Given the strong association between time spent on social media and risk-taking behaviour, public health interventions should consider targeting excessive social media use as a potential risk factor but also advocate for the removal of content that glorifies risk-taking behaviours. Addressing compulsive social media engagement through media literacy initiatives may contribute to reducing outdoor risk-taking. Future research is needed to establish whether social media exposure directly increases risk-taking or if individuals predisposed to risk-seeking behaviours are more likely to engage with social media. Platforms have a responsibility to collaborate with safety organisations and influencers to encourage the creation and dissemination of responsible content. Public health practitioners should seek to collaborate with influencers who have sway over a section of the population that they are trying to reach. These efforts are crucial for breaking the cycle of risky behaviours perpetuated by social media and preventing avoidable injuries.

Strengths and Limitations

This study benefited from a large sample size and a timely focus on social media behaviours. However, we are aware that self-reported data may introduce biases, and the cross-sectional design of the survey limits our ability to draw causal conclusions. Our study reveals that risk-takers spend significantly more time on social media. We are unable to determine if this is a bi-directional relationship due to the study design.

Conclusion

This study offers a brief overview on the role of time spent on social media in shaping risk-taking in the outdoors and its broader implications for public health. The study determined a significant link between time spent on social media, influencer status and risk taking. Time spent on social media may need to be considered by public health practitioners and researchers when designing or testing interventions to improve safety in the outdoors at places frequented by social media users. Future research is critical to explore causal pathways between social media use and injury risks, as well as platform-specific trends that influence behaviour.

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