



SOUTH AUSTRALIAN DIGITAL YOUTH SURVEY

RESEARCH REPORT:
YEAR 2 RESULTS

Report Authors:

Morgan Sayer, Tyson Whitten, Russell Brewer, Jesse Cale, Thomas Holt and Andrew Goldsmith

Acknowledgements:

This research would not have been possible without the support of the South Australian Department for Education, as well as all the principals, teachers, staff and students at participating schools.

The project leads also acknowledge and thank the following individuals for their research and administrative assistance: Melissa de Vel-Palumbo, Sarah Fox, Caitlan Miller, Deb McBratney, Alexandra Baxter, Julie-Anne Toohey, Diego Dominguez Mejia, Angela Melville, Lucy Simmonds, Catherine Schubert, Cliff Sayer, Ros Wong, Helen Stephenson, Christophe Tiburzio, Edwin Sayer, Jenny van der Arend, Narmon Tulsi, Jeremy Ryder, Rigel Noble, Natalie Thomas, Amy Winter, Thomas Steeples, Nicholas Simm, Laurence Cobbaert, Isabella Stocco-Bradley and Sharyn Goudie.

This research has been funded by the Australian Government through the Australian Research Council (Discovery Project 170103538).

Please cite this report as follows:

Sayer, M, Whitten, T, Brewer, R, Cale, J, Holt, T and Goldsmith, A (2020). *South Australian Digital Youth Survey Research Report: Year 2 Results*. Adelaide: University of Adelaide.

Website: <https://digitalyouthresearch.org/survey>

Email: digital.research@adelaide.edu.au

Telephone: +61 8 8313 0978



TABLE OF CONTENTS

INTRODUCTION	1
PROJECT SAMPLE CHARACTERISTICS	2
KEY RESULTS FROM THE YEAR 2 SURVEY	3
FUTURE DIRECTIONS FOR THIS PROJECT	8



INTRODUCTION

The South Australian Digital Youth Survey (DYS) is a world-first longitudinal project exploring how adolescents use digital technology, and how this use changes over the course of adolescence. The project examines the links between how adolescents use technology and pathways into cyber risk-taking. In studying these links, this project seeks to identify the *technical, social, and individual* circumstances by which adolescents get drawn into cyber risk-taking. Understanding more about these circumstances will inform the development of prevention measures to mitigate such risk.

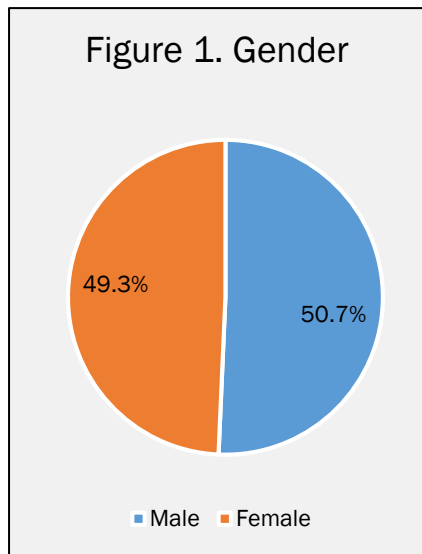
To accomplish this task, the DYS involves a longitudinal paper-based survey of a cohort of South Australian students commencing Year 8 in 2018. A total of 18 government schools from the Adelaide Metropolitan Region (i.e. located within 100 kilometres of the CBD) participated in the project, with 1,887 participants in Wave 1 in 2018, and 1,251 participants in Wave 2 in 2019. This research report presents results from the Wave 2 survey when participants were in Year 9. For a valid comparison of changes in technology use and risk-taking across the years, we report on only those participants who completed both waves of the survey (N = 1232¹).

¹ Note: Sample sizes per analysis vary due to missing responses for select questions.

Snapshot of DYS Wave 2 findings:

- There was considerable variation in the types of devices participants use, as well as the time spent using them.
- The majority of participants already demonstrate either basic or intermediate technical skills.
- Participants frequently engage in various routine tasks such as using social media and watching videos, and spend less time engaging in specialised tasks such as coding.
- 87% of participants engage in at least one type of cyber risk-taking activity, the most common being viewing hateful or violent content.
- The number of participants engaging in cyber risk-taking increased at varying degrees from Wave 1 to Wave 2 for every type of behaviour, with the exception of unauthorised access to someone else's electronic device or online account.
- The key variables associated with cyber risk-taking are: engaging in physical risk-taking (e.g., fighting), the frequency of performing specialised or routine activities online, being male, communicating with others online, being physically alone while online, increased technical skill, low level of self-control and compulsive internet use.

PROJECT SAMPLE CHARACTERISTICS

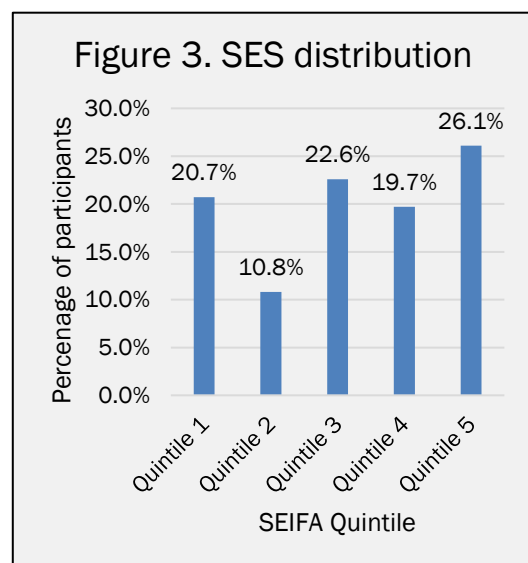
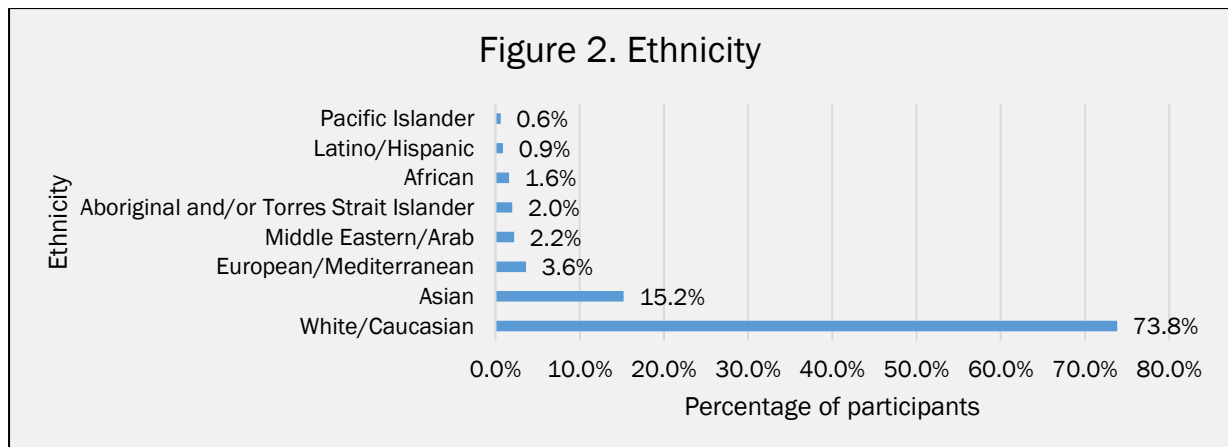


Gender

Figure 1 shows that the sample of participants who completed Waves 1 and 2 of the DYS (N = 1232) was evenly distributed with males constituting 50.7% and females constituting 49.3% of the sample.

Ethnicity

Figure 2 shows that over two thirds of participants reported Caucasian ethnicity (73.8%). Elsewhere, 15.2% of the sample reported coming from an Asian background. The remainder of the sample reported coming from European/Mediterranean (3.6%), Middle Eastern/Arab (2.2%), Aboriginal and/or Torres Strait Islander (2.0%), African (1.6%), Latino/Hispanic (0.9%) or Pacific Islander (0.6%) backgrounds.



Socioeconomic Status

Figure 3 represents the socio-economic status of participants who completed both Wave 1 and 2 of the survey - using the Australian Bureau of Statistics' *Socioeconomic Indexes for Areas (SEIFA)*. SEIFA indexes the average income and employment status of individuals living within geographical areas defined by postcode. SEIFA quintiles were derived from the 2016 Australian Census, and range from most disadvantaged (Quintile 1) to least disadvantaged (Quintile 5). The SES distribution is fairly even across all quintiles, with the exception of Quintile 2 (10.8%) which is underrepresented.

KEY RESULTS FROM THE YEAR 2 SURVEY

Understanding how adolescents use digital technologies

Figure 4 shows the proportion of participants reporting daily usage of digital devices. Participants reported being online an average of 6.6 hours per day with a standard deviation of 3.3 hours. The majority of participants used smartphones (89%) and laptops or tablets (82.6%) on a daily basis. A further 26.4% reported using gaming consoles, and 13.4% reported using desktop computers on a daily basis.

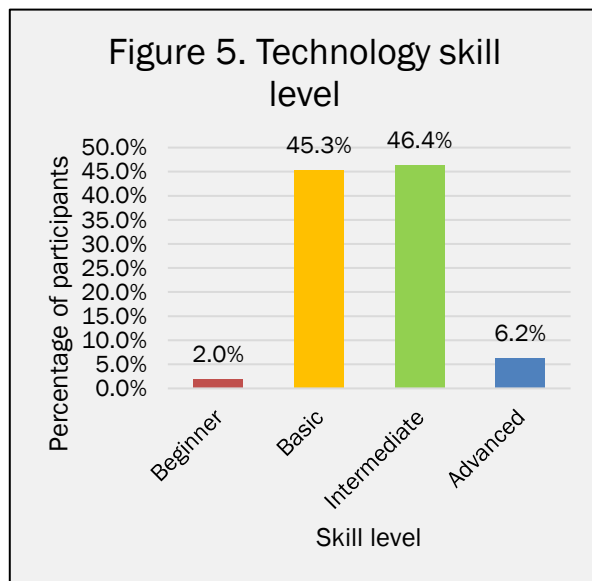
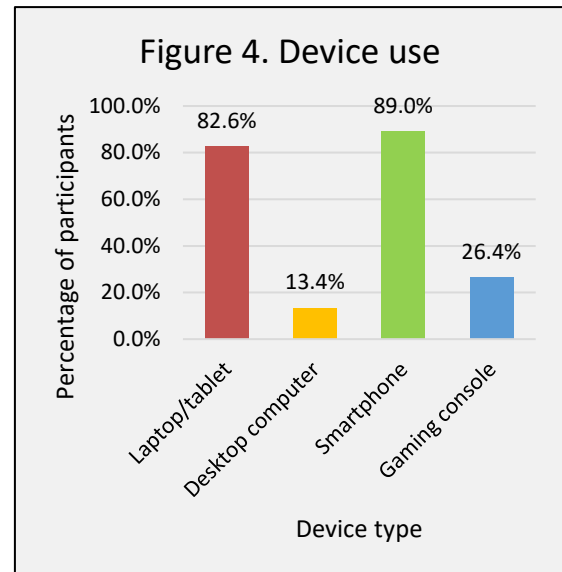
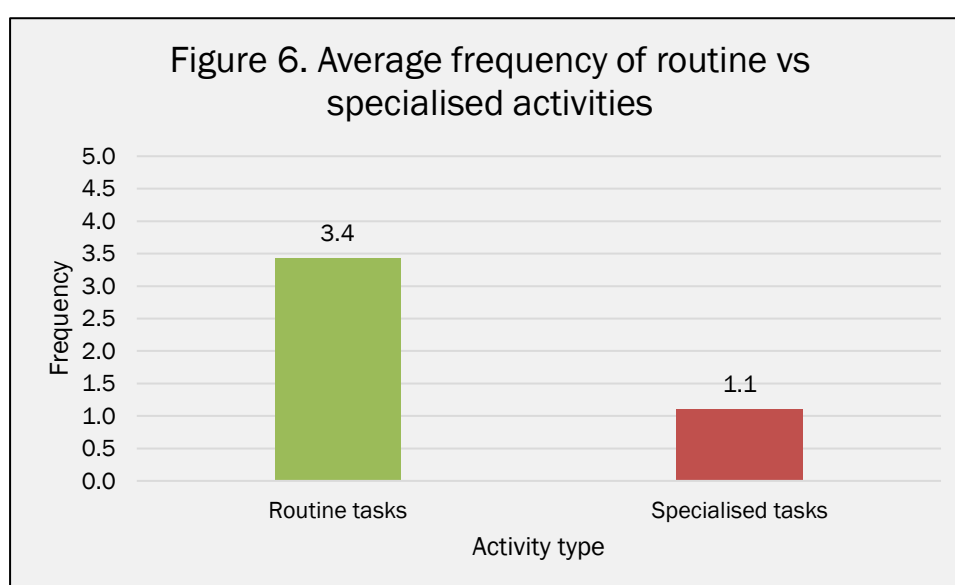


Figure 5 depicts the technical skills of participants, who were asked to rank their level of comfort performing various technical functions using software and hardware. Participant responses were categorised in four ways. A participant was listed as a 'Beginner' if they indicated that they do not use computers or mobile devices unless they absolutely must. Participants with 'Basic' proficiency used the internet and common software but did not feel comfortable fixing their own devices. 'Intermediate' users indicated that they could use a variety of software and could also fix some computer/device problems they run into. Finally, 'Advanced' participants felt comfortable undertaking

complex tasks such as using operating systems like Linux and other advanced software, in addition to fixing most computer/device issues they run into. Overall, technical proficiency has remained consistent, with no significant difference in reported technical skill between Waves 1 and 2. Figure 5 shows that the majority of participants at Wave 2 reported Basic (45.3%) to Intermediate (46.4%) technical skills, with a smaller proportion of participants possessing Advanced (6.2%) and Beginner skills (2.0%).

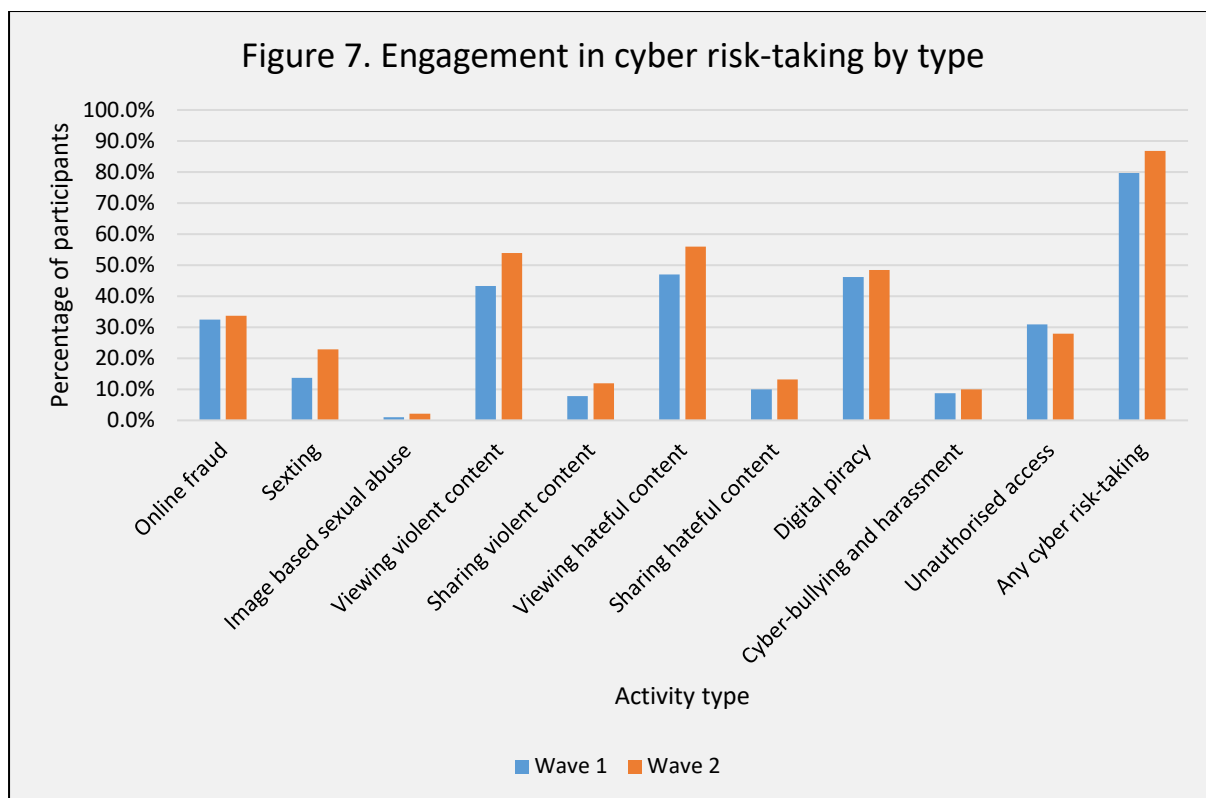
Understanding adolescent online engagements

Figure 6 shows the average amount of time that participants spent engaging in two broad types of online activities. These activities were categorised into: (1) routine tasks (e.g. sending and receiving emails, instant messaging, browsing social media such as Facebook, watching videos and movies, viewing images outside of social media, using cameras to take photos or record videos, sharing photos and videos on social media websites and listening to music); and, (2) specialised tasks (e.g. creating websites, file sharing, coding, posting on online forums, banking, using anonymisation software, online gaming). Frequency of engagement in the tasks was measured on a five-point Likert scale ranging from 0 = Never to 5 = Several times a day. The results show that participants reported spending a greater proportion of time engaging in routine tasks compared to specialised tasks. This was consistent with Wave 1 (3.0 for routine tasks, 0.7 for specialised tasks).



Understanding adolescent cyber risk-taking

Figure 7 shows the proportion of participants who reported engaging in different types of cyber risk-taking across Wave 1 and 2. The labels on the x-axis represent a range of cyber risk-taking activities. The results suggest general continuity in behaviours. Overall, there was increased engagement in each type of cyber risk-taking activity at Wave 2, with the exception of unauthorised access to another person's account. The proportion of participants engaging in any form of cyber risk-taking activity has increased from 79.7% at Wave 1, to 86.8% at Wave 2. The likelihood of engagement in cyber risk-taking at Wave 2 increased where participants had reported prior engagement. Participants who previously reported engagement in any cyber risk-taking at Wave 1 were 7.8 times more likely to engage again at Wave 2. There was variation in the degree to which engagement changed between waves for each type of cyber risk-taking activity – this is examined further below.



Online fraud refers to behaviours such as lying about one’s identity, buying and selling items illegally, and tricking another person or business into providing money, goods or services. The proportion of participants engaging in online fraud increased slightly by 1.2% from 32.5% at Wave 1 to 33.7% at Wave 2. An odds ratio analysis determined that participants were up to 5.4 times more likely to engage in this behaviour at Wave 2 compared to those who did not engage in this behaviour at Wave 1.

Sexting refers to participants’ experiences with seeing sexual content of someone they know, as well as sharing sexual content of themselves. The proportion of participants engaging in this behaviour increased by 9.2% from 13.7% at Wave 1 to 22.9% at Wave 2. Participants were 4.7 times more likely to engage in this behaviour at Wave 2 if they had engaged at Wave 1. *Image based sexual abuse* refers to sharing sexual content of someone else without their consent. The proportion of participants engaging in this behaviour was low and remained relatively stable between waves (1.0% at Wave 1, 2.1% at Wave 2).

Viewing violent content refers to viewing content involving violence against individuals, as well as groups of people. The proportion of participants engaging in this behaviour increased by 10.6% from 43.3% at Wave 1 to 53.9% at Wave 2. Participants who engaged in this behaviour previously were 3.8 times more likely to engage in this behaviour again at Wave 2. *Sharing violent content* refers to the sharing of violent content online. The proportion of participants engaging in this behaviour increased by 4.1% from 7.8% at Wave 1 to 11.9% at Wave 2. Participants were 4.6 times more likely to engage in this behaviour at Wave 2 if they had engaged in it previously.

Viewing hateful content refers to viewing content making fun of or discriminating against an individual or group of people because they are different. The proportion of participants who engaged in this behaviour increased by 9% from 47% at Wave 1 to 56% at Wave 2. Participants who engaged in this behaviour previously were 3.8 times more likely to engage in this behaviour again at Wave 2. *Sharing hateful content* refers to the sharing of discriminatory content online. The proportion of participants engaging in this behaviour increased by 3.2% from 10% at Wave 1 to 13.2% at Wave 2. Participants were 3.3 times more likely to have viewed or shared this discriminatory content at Wave 2 if they had done so previously.

Digital piracy refers to the downloading and sharing of copyrighted materials such as music, videos and software. The proportion of participants who engaged in this behaviour increased by 2.3% from 46.2% at Wave 1 to 48.5% at Wave 2. Participants who engaged in this behaviour previously were 4.7 times more likely to engage in it at Wave 2.

Cyber-bullying and harassment refer to searching for and/or sharing harmful content to make others feel bad or scared. The proportion of participants engaging in this behaviour increased by 1.3% from 8.7% at Wave 1 to 10.0% at Wave 2. Participants who engaged in this behaviour previously were 4.6 times more likely to engage in this behaviour at Wave 2.

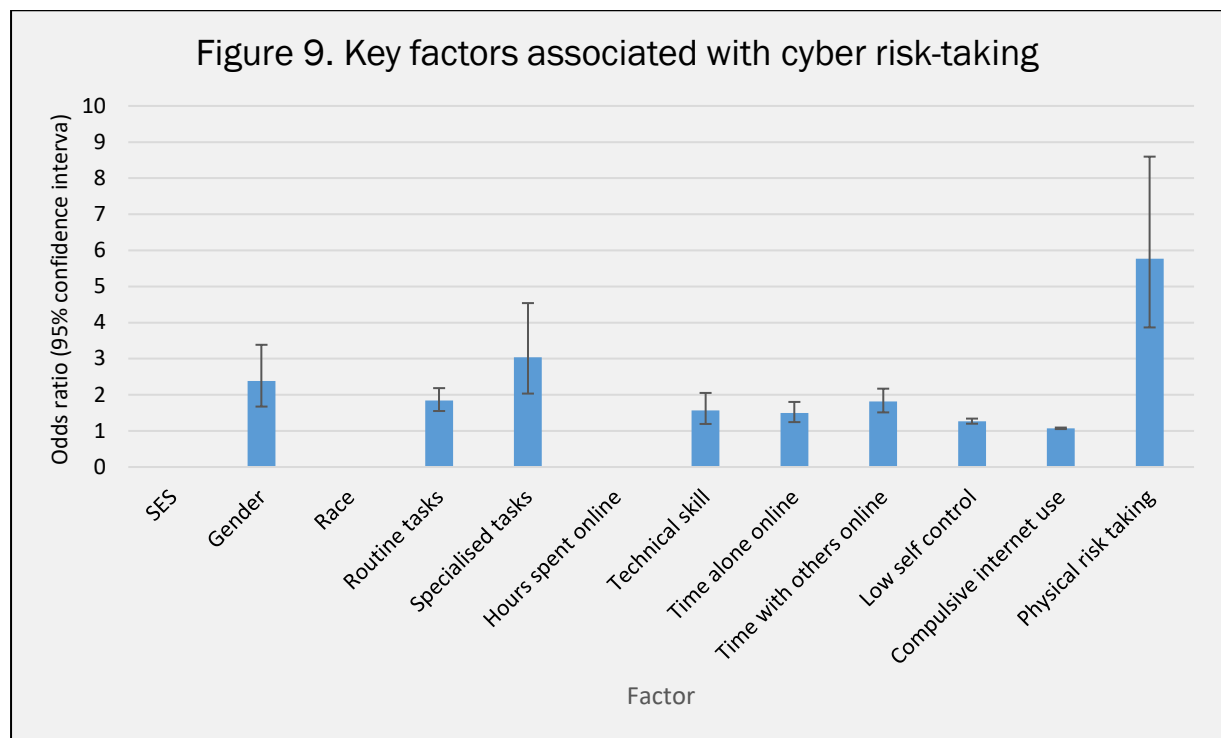
Unauthorised access refers to accessing other people's devices or accounts without their permission. The proportion of participants engaging in this behaviour decreased by 3% from 30.9% at Wave 1 to 27.9% at Wave 2. However, participants who engaged in this behaviour previously were 4.8 times more likely to engage in this behaviour again at Wave 2.

In short, against the backdrop of minor increases in the prevalence of different types of cyber risk-taking, the results suggest a large degree of continuity in the behaviours among a small cohort of participants.¹

¹ The increase in cyber risk-taking at Wave 2 compared to Wave 1 was statistically significant across all online activities at an alpha level of 0.05 – except for online fraud, digital piracy, cyber-bullying and harassment, and unauthorised access, where there was no significant difference across waves.

Identifying factors associated with cyber risk-taking

Figure 9 shows that there are 9 key factors associated with cyber risk-taking at Wave 2. The strongest factors associated with cyber risk-taking were physical risk-taking, followed by engagement in specialised activities online. More specifically, students who reported engagement in physical risk-taking were almost 6 times more likely to also engage in cyber risk-taking. Furthermore, higher frequency of engagement in specialised activities increased the likelihood of engaging in cyber risk-taking by 3 times. By comparison, the odds of engaging in cyber risk-taking also increased for: being male (2.4 times), increased frequency of engagement in routine activities (1.8 times), time spent communicating online (1.8 times), increased technical skill (1.6 times), more time spent physically alone while online (1.5 times), low self-control (1.3 times), and compulsive internet use (1.1 times). These factors were consistent with those at Wave 1, except for the number of hours spent online – with this being a significant factor at Wave 1 but not Wave 2. Across both waves SES and race were not significantly related to the likelihood of engagement in cyber risk-taking.



FUTURE DIRECTIONS FOR THIS PROJECT

The DYS provides a useful snapshot of self-reported digital uptake and risk-taking by adolescents from Years 8 to 9. We hope that this information will provide schools and parents with a better understanding of the different ways that adolescents use digital technology and the implications for risk-taking. Furthermore, developing a nuanced understanding of the factors associated with each form of cyber risk-taking provides an evidence base for the development of targeted interventions. The efficacy of cyber risk-taking interventions is reliant on the identification of factors which have been empirically shown to correlate with the problematic behaviour. This study demonstrated that a number of factors interact to increase the propensity for cyber risk-taking in adolescence. It is anticipated that the outcomes of this study will prove valuable for the design of targeted interventions to reduce the risk-taking behaviours of adolescents online.

