

How does the habitual use of online ephemeral media encourage the reckless offline decision-making behaviors of teenage international students in Singapore?

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Abstract

This paper studies the adverse effects of the habitual use of online ephemeral media and explores how they extend to have an influence on offline, in-person behavior. To answer this question, the researcher compared qualitative survey and interview data from 8 teenage international students in Singapore with differing levels of habitual ephemeral media use. Results from the survey show that those with lower levels of habitual ephemeral media use knew more about and applied more safety measures when posting on ephemeral media. Those with higher levels were more likely to engage in risky behaviors on ephemeral media. From the interview, the results showed that (1) risky behavior is normalized, validated, and encouraged by teens and their peers, (2) teens used trust as their primary form of safety measure against the negative effects of ephemeral media, (3) risky behaviors become riskier with the ephemeral media's influence, and (4) that habitual users were more likely to overshare offline as a result of online tendencies. However, this study relied on purely subjective participant perceptions, which may disturb true results. This study concluded with qualitative evidence that suggested (5) explicit education on ephemeral media's long-term effects was necessary to reduce the implications of these results.

Problem Statement

Today, there is a new problem with teenagers and risky decision-making both on and offline. Around the world, social media trends of reckless or illegal behavior have become normalized and encouraged by their peers (Sherman et al., 2016). Despite some knowledge of

online privacy practices and digital footprint in regard to modern hiring practices, the habitual use of ephemeral media (any self-destructing media that typically deletes after 24 hours) is suspected to allow for risky and naive behavior **online** (Vannucci et al., 2019), but such research does not explore the extent to which the habitual use of ephemeral media contributes to bad **offline** decision-making behaviors. This decision-making can also be attributed to a strive for virality (Berger & Milkman, 2012) and a predisposed tendency for bad decision-making (Buch et al., 2021). Possible solutions to this problem may be a qualitative assessment of young individuals and their perceptions regarding the presence of their own risky behaviors on ephemeral media outlets, as well as if they believe the repetitiveness of such behavior has made an impact on their day-to-day behavior. It would raise self-awareness of the issue and ultimately conclude with an analysis of possible educational opportunities to provide teenagers with to avoid the consequences of reckless offline behavior.

Introduction

In July of 2021, a 19-year-old international student in Singapore made headline news for illegally trespassing into the Singapore Zoo's rhino enclosure and doing a backflip for the camera. Dismissing concerns of privacy and consequences, the subject posted it on his Snapchat story, and it quickly gained traction after the video was reposted on various other social media outlets. It gained over a million views, and eventually, the subject was prosecuted for criminal trespass (Alkhatib, 2021), leaving the researcher to question: would the student have done this reckless action if it was not being videotaped for his Snapchat story? This example is just one of many types of behavior that stems from sensation-seeking (striving for attention and validation)

through ephemeral media (self-destructing media that typically deletes after 24 hours). Snapchat in particular has been coined a “haven for child abuse” (Doffman, 2019) as teenagers forgo concerns about protecting their online presence and reckless or criminal activity runs rampant.

Prior research suggests that perceived ephemerality lowers concerns about personal privacy (Morlok et al., 2017) and one’s digital footprint (Boudlaie, 2019), and that the habitual use of social networking sites adversely affects behavioral relations by influencing new companions to share content, pictures, sounds, recordings among them, allowing for a widespread network between these adolescents (Akram & Kumar, 2017). We also know that one’s lack of self-control in their online presence encourages themselves and others to continue this behavior, creating a “domino effect” and exponential increase of imprudent online behavior (Du et al., 2021). However, past research fails to recognize if the combination extends to offline behavior as well. As today’s teenagers find themselves in the vulnerable position of being the most involved with the digital era and having the most potential for negative future implications of ephemeral media use, this concern lies especially on them. This begs the question: How does the habitual use of ephemeral media encourage reckless offline decision-making behaviors in teenagers?

This research aims to execute a qualitative, grounded-theory thematic assessment of young individuals, specifically those from international schools in Singapore, and their perceptions regarding the presence of their own risky behaviors on ephemeral media outlets. To address the gap, the assessment will then determine if this population believes the repetitive use of ephemeral media has made an impact on their day-to-day behavior **without** the direct presence of such media and sensation-seeking temptations.

Literature Review

To explore the research's gap, this literature review will first cumulate the consequences of habitual online ephemeral media use in regard to real-life situations so as to explore possible behavior-hindering factors that have already been proven. Using this knowledge, the researcher will then explore how these factors contribute to the negative influence of online ephemeral media on real-life decision-making behaviors through qualitative data from a sample study.

Online Ephemerality's Effect on Behavior and Personal Privacy

Since the successful release of Snapchat – a prominent social media application used primarily by members of the younger generations that allows one to send disappearing messages, pictures, and post “stories” that disappear after 24 hours – in 2011, other social media sites have followed suit, implementing ephemeral features onto their own sites (Litsa, 2018). Instagram's stories, for example, aim to promote a more casual environment around posting (Kramer, 2017), whereas Whatsapp's disappearing messages aim to safeguard private information (Page, 2020). These features, however, have instead promoted a culture in our youth lacking privacy and consequential concerns for their online actions (Handyside & Ringrose, 2017). Because Snapchat notifies a user when ephemeral media has been saved by the receiver, it has, over time, created a principle in the form of unspoken negotiation rules around saving certain content sent on these applications: when the potential for harm is high, such as personally revealing content, the norm is not to save or share the media (Xu et al., 2018). As such, this allows teens to trust a receiver of

more “personal,” unprofessional, or embarrassing content that therefore allows them to treat ephemeral media sites differently than they normally would treat other social media sites.

Instead of the intended use of ephemerality for privacy and safety regulation, recklessness in striving for virality as well as illegal behavior has found a convenient outlet to thrive. Ephemerality makes it easier for illicit activities to take place, such as the distribution of drugs or child pornography (Chen et al., 2019), which has created a newfound concern for the online behaviors of the impressionable youth at the culmination of media and internet use (Vannucci et al., 2020).

As perceived ephemerality increases the frequency of consumer use of the site (Kircova et al., 2020) and lowers concerns of privacy and a positive online presence (Morlok et al., 2017), we can also assume that the habitual use of ephemeral media will have a strong correlation with negative online behaviors, such as sharing confidential information and media, posting oneself in embarrassing or illegal situations, or sharing inappropriate opinions, therefore consequencing one’s digital footprint and therefore increases risky online behaviors. One study found that, despite prior knowledge about the importance of one’s digital footprint, 52.43% of the surveyed students were okay with sacrificing their privacy in exchange for the use of free applications or services due to the enjoyment obtained from such sites (Bhatnagar & Pry, 2020).

Why is this so? Aside from ephemeral media’s negative impact, it brings positive benefits to the digital age, such as the fostered culture of casual communication. Snapchat has allowed for the presence of more intimate networks, the prevalence of mundane connections with close contacts, and the reduction in self-consciousness in such communication (Xu et al., 2017). The ephemeral features it constitutes allow for the self-destruction of potentially embarrassing

content, as subjects stated that Snapchat fosters a “less front-stage self-censorship and more ‘be yourself’ back-stage performance,” giving insight into why these types of social media platforms are so popular today.

Online Ephemerality’s Effect on Behavior and Digital Professionalism

In regards to a professional environment, ephemerality has also cultivated a lower guard in young individuals for moral and ethical values. For example, one study using a grounded-theory assessment of the online behaviors of early medical students found a reciprocal increase in unprofessional behaviors in the digital area, as 80% of the students surveyed were not concerned about patient privacy online or data protection (Guraya et al., 2021). The students admitted to violating medical codes of conduct regarding patient information and attributed it to a lack of concern for the spread of patient information given that they had posted or shared personal patient information online with their peers on disappearing media. This qualitative study contributes to the idea that the use of ephemerality is correlated with risky, low-moral and unprofessional online behavior in adolescents, even under the medical code of conduct, exemplifying one of the drastically intense effects of habitual ephemeral media use.

Additionally, as the digital era advances, employment practices follow. One’s digital footprint can impact college admissions processes, hiring practices, and even result in employee terminations (Boudlaie, et al., 2019). Research has identified a need for educating future employees on the implications of an unprofessional digital footprint, as the misuse of social media has promoted the increase of employee tracking online and hiring managers finding reasons not to hire an applicant (Boudlaie, et al., 2019). Factors like ephemerality in social media

become increasingly prevalent, as with risky behaviors and lower concerns for privacy, one's digital footprint is a concern for most as it has real-world consequences. As today's youth begin to enter the working world, education and training on the risk use of such social media outlets prove a necessity, as corroborated by 80% of students in a survey of college students (Bhatnagar & Pry, 2020).

Conclusion

The literature review has explored the known effects of the habitual use of ephemeral media. Research has been compiled to conclude that perceived ephemerality lowers concerns of personal privacy (Morlok et al., 2017) and one's digital footprint (Boudlaie, 2019). Research by Xu et al. in 2018 also concludes that teens tend to trust the unspoken rules that surround ephemeral media, allowing them to treat these sites differently than they would with other outlets. The source also infers that this compromises minor safety as ephemeral media creates a habitat for illegal behavior to thrive. In addition, research by Guraya et al. in 2021 has shown that one drastic effect of the habitual use of ephemerality is a lack of digital professionalism and loss of adherence to professional values. As the decrease in privacy concerns amount to an increase in posting inappropriate or embarrassing content, one's digital footprint has been proven to be negatively impacted by the effects of ephemeral media.

These findings consolidate to help the researcher understand what effects of ephemeral media have already been studied and given insight into the extent to which such media impacts the online decision-making behaviors in teenagers. The research already studied, however, still fails to take out the direct influence of the option to post on ephemeral media to study its effects

in offline decision-making. Using what has already been proven, the researcher can now use the successful methods and theories derived from existing research to explore the gaps in offline behavior. This new research, in turn, will gain awareness of the effects and mindset changes that come from continual ephemeral digital media use in order to educate the population of the world today that heavily relies on such social networking sites and to encourage the reevaluation of online digital profiles and decision-making behaviors in our youth.

Methods

Research Method

In this study, a qualitative, grounded theory thematic analysis was used in order to understand and categorize the subjective opinions of the participants. Because the data is subjective and from a small subset of international students in Singapore, using a grounded theory method allows the results to be “grounded in the views of participants in a study” (Creswell, 2014) and allows the researcher to extract general concepts from the interview’s results (Merriam & Tisdell, 2009), allowing their personal opinions and experiences to guide this research’s conclusive results. As such, using a grounded theory method was necessary to develop the theory that the habitual use of ephemeral media will have a negative effect on offline decision-making through an objective lens.

Participants

This research’s participant group consisted of 8 international students in Singapore. As the study necessitated at least 30 minutes devoted to each participant, it is unfeasible to collect

data from a large number of potential participants. The 8 participants included 2 (one male, one female) from each age group (15-18) to avoid gender bias, as males tend to make more extreme decisions that suggest a possible natural increase in risky decision-making behaviors (Thoni & Volk, 2021). This age range was used as there is prior evidence of reckless decision-making behaviors in teenagers of this cohort that support the research theory regarding ephemeral media, such as the 18-year-old Singaporean international student charged for criminal trespass at the zoo after sensation-seeking on Snapchat. As decision-making is most vulnerable in one's teenage years and risk-taking is more prevalent in this age range (Balogh et al., 2013), as well as ephemeral media features such as Instagram's Stories or Snapchat as a whole becoming more prevalent in today's youth (Litsa, 2018), the age range of high school students are especially appropriate in consideration of the influence of ephemeral media. These participants were selected through email (Appendix A) based on the criteria of age, gender, and the participant's positionality as an international student. Additionally, each participant was offered a \$20 SGD Amazon gift card as a compensation for their time and honesty during the study.

Procedure

This research was proposed using an Institutional Review Board Application (Appendix B) and structured through the Research Inquiry Proposal form (Appendix C). After approval, this study used both a pre-interview survey and an in-person interview as its primary sources of data. Throughout the study, all interviews and online survey data remained anonymous. This was to ensure honest answers from the participants without the threat of further contaminating their digital footprint, as well as safeguarding information that admits to having done illegal activity.

This was guaranteed through a Confidentiality Agreement (Appendix D) that was given to them prior to filling out the pre-interview survey and articulated the strictly withheld release of private or identifying information that was presented before carrying out the study. Parents of underaged participants were given a Parent Consent Form (Appendix E) to reassure both the student and the parent that all information is confidential between the participant and the researcher and protects the minor from the risk of prosecution when they chose to admit illegal or underaged behaviors.

Through a semi-structured approach, as used in Buch et al.'s 2021 research, the participants were then given an online pre-interview survey (Appendix F). This was created through a Google Form, which included a Likert scale questionnaire with 4 choices for responses (Strongly Disagree, Disagree, Agree, Strongly Agree) that aimed to determine participants' initial knowledge of how much of a threat they perceive privacy, negative digital footprint, and level of dependent trust on the receivers of one's ephemeral media. Buch et al.'s 2021 research used a similar Likert scale with 4 options when studying the decision-making skills of adolescents so as to avoid any "mediator" answers (answers that stated a participant had moderate or no opinion on the question). The participants were also asked about their levels of ephemeral media use per day. Participants who used ephemeral media for less than 2 hours were labeled as "Low" frequency users, 2-3 hours were labeled as "Moderate," 4-5 hours were labeled as "High," and over 5 hours were labeled as "Very High" frequency users of ephemeral media. Results from the pre-interview were derived from averaging the responses from each of these subgroups.

After completing the survey, participants then responded to the in-person interview, where they were questioned on their personal experiences and opinions on their experiences and

motivations for posting or engaging in risky behavior on ephemeral media and in real life (Appendix G). This was recorded using Otter.ai, a digital voice recorder that transcribes one's vocal responses into text, so as to preserve anonymity. The interview encouraged participants to respond with honest, unfiltered responses so as to gather valuable and true data.

Data Collection

After collecting the data, the responses were organized, categorized, and analyzed. Data from the pre-interview survey was first grouped based on the participants' levels of ephemeral media use per day (moderate, high, or very high) and the Likert scale responses were averaged within these groups (to represent strongly disagree, disagree, agree, or strongly agree). Then, the averaged responses from the three groups of participants were compared with each other to find an increasing or decreasing trend in agreement among those with lower or higher levels of ephemeral media use.

Data from the in-person interviews were transcribed from Otter.ai. Sections of important data that answered the interviewer's questions were compiled to find statistical data on bad decision-making behaviors, as well as common, prominent responses (3 or more participants had the same response) to the interview's guiding questions (Appendix G). Once these responses were separated from the original interview transcripts, they were later categorized by sorting them into one of 5 codes (sensation seeking, trust, normalized, privacy, and security) and compiled with the data from the pre-interview survey in order to find the 5 major themes/results.

Discussion

Findings

The following conclusion from this qualitative research answers the following: *How does the habitual use of online ephemeral media encourage the reckless offline decision-making behaviors of teenage international students in Singapore?*

Before diving into the results, readers should know that, of the 8 participants, their levels of ephemeral media use differed unfavorably: results from the pre-interview survey indicated that 4 participants used ephemeral media for 2-3 hours per day, 3 participants used ephemeral media for 4-5 hours per day, and 1 participant used ephemeral media for more than 5 hours per day. These categories were listed as “moderate”, “high”, and “very high” respectively. To explore the importance of having *habitual* use of ephemeral media, answers from each of these groups of participants in both the survey and the interview were compared, where the researcher found disparities between participant perceptions of the effects of ephemeral media use.

Using the survey, the research first addressed if the groups with different levels of ephemeral media use had differing concerns for their behavior regarding concerns of personal privacy online, as there is a culture in our youth lacking privacy and consequential concerns for their online actions (Handyside & Ringrose, 2017). These responses were answered on a 4-point Likert Scale (1 representing “Strongly Disagree” and 4 representing “Strongly Agree”) and condensed by the researcher by averaging the numerical scores from each usage group and assigning its respective qualitative response. The results of the survey are shown in *Figure 1*, which is pictured below.

Figure 1

1. I make sure to take safety measures when posting or sending something online.

Moderate	High	Very High
Agree	Disagree	Disagree

2. I trust my friends to not save or screenshot something personal, intimate, confidential, or illegal I've sent to them on Snapchat.

Moderate	High	Very High
Agree	Agree	Strongly Agree

3. Sending something personal, intimate, confidential, or illegal is safer on apps like Snapchat than it is on apps like iMessage.

Moderate	High	Very High
Agree	Strongly Agree	Strongly Agree

4. I often think about how my social media profiles represent a positive image of me to future employers.

Moderate	High	Very High
Agree	Agree	Agree

5. I often think of protecting my own safety in real life when I share personal information on social media.

Moderate	High	Very High
Agree	Disagree	Disagree

6. I know of the negative effects of ephemeral media has on my privacy guard, digital profile, and personal safety.

Moderate	High	Very High
Strongly Agree	Agree	Agree

From the results shown above, the research found that moderately habitual users (2-3 hours per day) of ephemeral media were more likely to take safety measures when posting online

to protect their offline identity (q.1, q.5), whereas high and very high users of ephemeral media perceived that they generally did not. This result implies that those who used ephemeral media less are generally more responsible, and serves as the research's first indicator of an implication of habitual ephemeral media use that extends beyond purely online decision-making. Moderate and high users generally trusted their peers not to screenshot or share personal or risky media shared on ephemeral outlets, whereas very high users strongly trusted their peers to do the same (q.2). This implies that trust is generally used as a form of privacy measure against the negative effects of ephemeral media use, but users with higher levels of ephemeral media use depend more on trust as their primary instrument of safety measure. Moderate and high users surveyed agreed that sending personal or risky media is safer on apps like Snapchat than iMessage, and very high users strongly agreed (q.3), confirming the researcher's notion that unspoken negotiation rules (Xu et. al, 2018) allow habitual ephemeral media users to treat ephemeral media sites differently than they normally would treat other social media sites, more so in those with higher levels of consistent ephemeral media use. All parties own concerns about digital professionalism (q.4) and were generally knowledgeable of the negative effects of ephemeral media on their privacy guard, digital profile, and personal safety, but moderate users had more of an understanding of this than high or very high users (q.6), suggesting that their other, safer tendencies regarding one's behavior on ephemeral media (as compared to high or very high users) may be accredited to a better level of knowledge on ephemeral media's negative consequences on real-life behavior.

With further exploration in the interview, this finding contributed to the idea that a possible solution for the negative effects of ephemeral media the research explored may be

pushing for more explicit education on privacy, safety, and decision making regarding ephemeral media and its online and offline consequences. As more than half of the questions in the pre-interview survey had responses that were increasing or decreasing in level of agreement respective to their level of ephemeral media use (moderate, high, and very high respectively), this shows the researcher that the level of habitual use plays a significant role in ephemeral media's online and offline implications.

A qualitative, in-person interview followed the pre-interview survey, and aimed to first explore the motives behind engaging in risky behavior on ephemeral media, prompt reflection on their experiences with engaging in risky behavior for the purposes of sharing the content on ephemeral media, and if participants believed that habitual ephemeral media use has an effect on their offline lives. The following themes of results were derived from coding the data:

1. Risky behavior on ephemeral media is normalized & encouraged

All 8 participants indicated that they engaged in risky behaviors on ephemeral media. For example, all participants have shared themselves or their peers drinking alcohol, 4 participants shared themselves or their peers smoking cigarettes or e-cigarettes, 4 participants sent personally-revealing media, and 3 participants admitted that they have shared media of themselves or their peers using or possessing drugs. However, when asked to explain the decision-making process and level of concern behind posting this behavior, all 8 participants agreed that they did not worry about their actions as it was no big deal as all their peers did the same. One participant noted,

“I don't really think it'd be that big of a problem and I don't think anyone will really screenshot

what I post or even care enough to.”

This is especially concerning when considering the location of this study’s participants: In Singapore, the possession or use of drugs carries one of the heftiest penalties in the world, ranging from 10 years of imprisonment to the death penalty (Chen, 2014), and half of this study’s participants were relatively unconcerned about their actions in posting such behavior publicly on ephemeral media.

Additionally, risky behavior on ephemeral media is encouraged by teens and their peers. 7 of 8 participants noted that sensation-seeking, peer validation, and “looking cool” to their peers were large motives for them posting risky behavior. In line with Du et al.’s 2021 assertion that one’s lack of self-control in their online presence encourages themselves and others to continue this behavior, participants admitted that seeing their peers engage in such behaviors encouraged them to do the same. As one participant noted,

“I definitely think it does influence other teenagers into engaging in the same behavior, because if others are okay with it, and they’re not getting in trouble, it kind of like, ‘okay, I can do it too,’ without really having any repercussions.”

However, 3 of 8 participants also noted that their decisions to engage in or post risky behaviors on ephemeral media do not have such intentions. Some of the time, one participant remarked, “being able to look back at your experiences and capture the moment and share it with others” is also a large motivation for posting risky behavior on ephemeral media outlets.

2. Trust is the main form of privacy and safety measure on ephemeral media

The study found that, of 8 participants, 7 admitted that they trusted their peers not to save or screenshot risky material that they send or post on ephemeral media, and 5 of those 7 participants did not take any additional safety measures to protect their digital identity or offline privacy and wellbeing. This data, along with prior literature indicating that unspoken negotiation rules on ephemeral media prevent users from saving or sharing others' risky material (Xu et al., 2018), suggests that trust in one's peers is the primary instrument that defines most ephemeral media users' protection from implications like a negative digital profile, lack of privacy, and even prosecution for illegal behavior.

3. Risky behaviors become riskier with the influence of ephemeral media

Of 8 participants, 4 admitted that they would engage in riskier behaviors if they were able to post it on apps like Snapchat, where they would both gain attention for their actions (theme #1) and be safe from their peers sharing their content (due to the nature of Snapchat's ephemerality). When asked if they would still engage in risky behavior if they did not have the option to post [on their Snapchat story], for example, a video of them jumping off a roof into a pool, one participant responded,

“Um, probably not. I don't think so because like, where would it go? What is the point of it then?”

However, of the 8 participants, 6 agreed that they were more likely to exaggerate already-occurring risky behavior instead (for example, drinking more than they normally would without ephemeral media's influence, chugging alcohol instead of sipping, etc). Combined with data from the pre-interview survey suggesting that the participants would engage in riskier

behaviors on ephemeral media than on non-ephemeral social media, the researcher concluded that the influence of ephemeral media will not *cause* an individual to engage in risky behavior in person, but the influence is likely to exaggerate already-occurring risky behavior.

4. Offline habits, like oversharing, can be developed

One offline habit that 6 of 8 participants believed they developed from the influence of their habitual use of ephemeral media is oversharing. Oversharing online means divulging more of their inner feelings, opinions, and sexuality than they would in person (Agger, 2012). These participants found that, because of being able to overshare on apps like Snapchat due to its ephemeral nature, they have been more likely to overshare in person. This, depending on the circumstance and intensity of such behavior, may prove to have a highly harmful implication on one's digital professionalism and profile or social status, especially in the era of cancel culture (Ng, 2020).

5. Explicit education on habitual ephemeral media use's consequences is a necessity

Of all 8 participants, the researcher identified no clear definition or clear source of general education around ephemeral media and how to act safely on it. 6 of 8 participants did not believe that they knew enough about the implications of bad-decision making behavior on ephemeral media other than using common sense. The remaining 2 participants attributed their education to prior experiences, such as getting in trouble for posting or engaging in risky behaviors on ephemeral media. One participant noted,

“... [education on ephemeral media] has not been adequately taught at school, aside from in sixth grade when they gave us laptops. Aside from that, there hasn’t really been anything else.”

From q.10 of the pre-interview Survey, the research showed that as levels of habitual ephemeral media use increased, the less likely the participants were to agree that they understood the negative consequences ephemeral media has on their privacy guard, digital profile, and personal safety. The results from both the interview and pre-interview survey consolidate to the conclusion that, with more explicit education on how to act on ephemeral media and its offline implications, we can reduce the negative behaviors that ephemeral media influences.

Conclusion

Through a ground theory thematic analysis, the research found that the habitual use of ephemeral media encourages already-occurring risky behavior and promotes potentially harmful offline habits. The data also suggests that explicit education on the harmful effects of such use of ephemeral media as well as education on how to act, treat, and be safe on ephemeral media may reduce these effects.

Limitations

This research study was highly successful in developing the theory that habitual ephemeral media use encourages negative-offline decision-making behaviors by identifying 5 themes of results that contribute to both the causes and effects of such ephemeral media use. However, some flaws in the process of carrying out the study did produce some unforeseen

challenges. Firstly, in the pre-interview survey, there were an uneven number of respondents in the low, moderate, high, and very high subgroups. 0 participants noted that they had low-level use of ephemeral media, 4 participants had moderate use, 3 participants had high use, and 1 participant had very high use of ephemeral media per day. Because the researcher summarized the responses from each group and compared them among each other, there was no data to represent those with low levels of ephemeral media use. Most of the data were from those with moderate or high levels of ephemeral media use. Only 1 participant represented very high levels of ephemeral media. Future research could filter their acquired participants to have an equal number of participants from each subgroup so as to average the impact of outlier data, allow for equal and more accurate comparisons, and clearly identify that high levels of ephemeral media use have a clear relationship with offline behavioral consequences. Additionally, this limitation may have caused some data from the Pre-Interview survey to produce inconclusive results. For example, q.9 produced data that did not seem to have a relationship with the subgroup's level of use of ephemeral media (see Figure 2).

Figure 2

9. Ephemeral media influences my decisions.		
Agree (3)	Disagree (2)	Agree (3)

Those in the moderate group agreed that ephemeral media influences their decisions, and those in the high group disagreed, yet those with very high ephemeral media use answered that they agreed. 4 questions in the survey produced inconclusive results like these.

Additionally, as this study only focused on subjective responses from participant experience and perception, it is impossible to prove the theory that habitual ephemeral media use encourages negative offline decision-making behavior. Participant responses followed the honor code, and we can only create conclusions from the data based on such responses. This, however, adheres to the use of a grounded theory approach in such research, and similar researchers foreseeing similar natures of results should follow the same.

Future Research

The findings of this study are preliminary, and, since this paper is one of the first to explore the consequences of habitual ephemeral media use *beyond* online behavior, a lot more can be done to further the existing body of knowledge on this topic.

One possible direction to build on this paper's findings is to find the extent to which risky behaviors become riskier with ephemeral media's offline influence. A researcher could use the same method to focus on a more specific extension of this research, using qualitative interviews to observe the specific differences and exaggerations in lived experiences of the participants between behavior they would engage in without the influence of being able to post on ephemeral media and with the same influence. This would enhance the current understanding of the severity of ephemeral media's influence on offline risky behavior.

Another possible direction to build on this paper's findings is to find the best possible ways to educate the youth on this phenomenon. For example, research could be conducted to compare the efficiency and retention of different approaches to teaching teens safety while using

ephemeral media, and possibly draft a solution plan for future educators and parents to follow in order to reduce the negative effects of the habitual use of online ephemeral media.

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Appendix A: Participant Recruitment Email

Hi,

Because of your age group, gender, and status as an international student, you've been selected to participate in a study about ephemeral media's effect on decision making (in-person interview, max 30 min). Yes, you will get a \$20 Amazon gift card for your time.

IF YOU ARE UNDER 18: Please have your parents fill [this consent form out](#), and then I can go ahead with scheduling a time to meet with you. This is necessary to participate. Please email me once this is completed, as **I do need to schedule you this week or next**. If I haven't already talked to you about your meeting time, I can pull you out of your study hall for 30 minutes, meet you at lunch, or try to schedule it during your free.

What the study is about:

Remember that 19-year-old that did a backflip in the rhino exhibit at the Singapore Zoo and posted it to his Snapchat private story before it went viral on TikTok and Instagram, and eventually got prosecuted? As a researcher, I wondered if this would've happened without the influence of being able to post on ephemeral media (anything that deletes in 24 hours – Snapchat, Instagram stories, etc). Would he have done this backflip (considered a reckless action as it is dangerous to one's safety, and potentially compromises future professional endeavors) on his own? Has ephemeral media influenced his decisions in real life?

What the study entails:

- Filling out the parent consent form (2 min)
- Filling out a participant confidentiality consent form (2 min)
- Filling out a short, online survey with a Strongly Disagree - Strongly Agree scale (5 min)
- Participating in a ~20-30 minute interview in-person.*

*This section of the study will encourage honest, unfiltered answers. A parent consent form is needed to participate as the participant may choose to admit previous illegal behaviors and/or personal or intimate information, and this may be uncomfortable for some. However, please note that this study is COMPLETELY ANONYMOUS and no identifying information (other than consent forms, which will not be used as research data but is instead a precaution for the school) will be shared.

Appendix B: Institutional Review Board (IRB) Application

Institution: Singapore American School

Department: High School Quest

SDS Start and End Dates: August 2021 - April 2022

SDS Status: New Project

Project Type: Student research, Quest Student-Designed Study (under faculty direction)

Class: Quest Research

RESEARCH PROJECT

Student Researcher Name	
Student Address, Phone Number(s) and e-mail address	+65 XXXXXXXX XXXXXXXXXXXXX@gmail.com
SDS Research Title	How does the habitual use of online ephemeral media encourage the reckless offline decision-making behaviors of teenaged international school students in Singapore?
Purpose/Goal of Study	To find a correlation between the habitual use of ephemeral media applications and reckless offline decision-making without the influence of ephemerality.
Context for Research	A grounded-theory thematic assessment that uses qualitative interviews that explore how aware people are of the effects of habitual ephemeral media use and its correlation to negative real-life behaviors without the influence of ephemeral media, eventually recommending methods that will prevent this change in behavior and to raise awareness and inspiration for continuations of the study.
Where will the work be done?	SAS Campus

SDS Quest Advisor's Name and Email	Kris Munden, kmunden@sas.edu.sg
SDS Mentor's Name and Email	Cho Hichang, hichang_cho@nus.edu.sg
I am enrolled in AT Research <i>(keep one)</i>	YES
I plan to submit to AP Research <i>(keep one)</i>	YES
I plan to publish my research <i>(keep one)</i>	NO
Do you plan to work with any outside institutions or organizations to conduct your study <i>(keep one)</i>	NO
If you answered "YES" above: List local institutions the researcher plans to collaborate with in their research and what steps they have taken so far to secure approval to work with these institutions.	
Does your study have any participants? <i>(keep one)</i> Note: if your study involves you as a participant in which you are the subject being studied or your personal data will be collected as part of the study conducted, your participation counts in the IRB as you must ensure no harm comes to yourself from this study. You will be considered as the participant; therefore your answer should be "YES").	YES
If you answered "NO": You are exempt from completing the remaining sections of the IRB application If you answered "YES": Please complete the remaining sections of the IRB application. This is needed for final approval of your study.	

IF YOU DO NOT HAVE ANY PARTICIPANTS, STOP HERE.

If your study involves working with any participants, please complete the following section:

RESEARCH PARTICIPANT INFORMATION

Instructions: For each prompt with a "YES", "NO", or "Not Applicable" response options, keep one response that is true for your study; delete the responses that do not apply.

List known groups of participants (e.g. self, targeted groups or individuals such as students, faculty, parents, community members, workers, researchers)	20 students aged 15-18, divided into groups of 4
Is participation in this project or study voluntary for the individuals participating in the program or study?	YES
Will your study include participants from the SAS community?	YES
If you answered “YES” above: Check all that apply and estimate the total number of individual participants in each relevant category about whom you will be collecting data for your SDS:	☒ SAS Children/youth under 18 Number: - ☒ SAS High school students Number: 20 ☐ SAS Faculty/Staff/Administration Number:
Does your SDS involve participants or individuals from any of these special/vulnerable populations? <i>(bold all that apply)</i>	☐ No special/vulnerable populations ☒ Children under 18 years of age ☐ Economically disadvantaged ☐ Individuals with intellectual disabilities ☐ Individuals with physical disabilities ☐ Elderly ☐ Prisoners
If your study involves participants under 18 years old, will your study require parent consent to participate?	YES
Does your study involve the collection of data that identifies individuals? (e.g., cohort databases include SSN# or IC/FIN# or data on individuals, surveys, or interviews identifiable by name or student number, etc.)	NO
If you answered “YES” above: Please list what identifiable data you intend to collect.	
Will identifiable data of individuals be shared with anyone? (performance report for a funding source, conference presentations, published articles, and reports, etc.)	NO

Is there any potential risk(s) to participants by participating in your study? (psychological, social, economic, physical, legal)	YES
If you answered “YES” above: If there is risk to participants, what steps or follow up will the researcher take to mitigate or address potential for harm?	The potential risk includes the following Admitting illegal behavior in the past. The following steps will be taken to mitigate potential risk 1. Keeping participant identities strictly confidential to the researcher. 2. Parent and student sign a consent form. 3. Using only the transcriptions without identifications in my Otter.Ai data
Will participants be fully informed about the benefits and risks?	YES
Will participants, prior to the study, indicate informed consent to participate by completing and signing a written form?	YES
Is a sample of your consent form included in your IRB application form ?	Not Yet
Will participants be videotaped during the project or study?	NO
Will participants’ privacy and personal information be protected?	YES
Will participants be debriefed following completion of the project or study?	YES
Are the participants being offered one or more incentive(s) to participate? (money, extra credit for a class, voucher, etc)	YES
Does the funding source for your study have any potential for financial or professional benefit from the outcome for this study or project? (are there any ethical issues to consider for any funding sources for your	NO

study?)

If your response is “YES” to the above:
Please explain.

INSTRUMENTATION

Are all of your data sources clearly identified? (this is where your data will come from such as interviews, surveys, existing project data such as services received, reports, grades, existing school records, focus groups, etc.)	Not Yet
List all instruments, apparatus, equipment, and/or technology to be used for your study (e.g. consent forms, surveys, questionnaires, email, Google sheets, Otter AI, specific hardware, software, etc.)	Otter.ai Google Forms Adobe Sign Email Incentive (Pizza, Sodexo voucher, money, etc)
List the type of participant data and information needed, if applicable (e.g. demographic data, performance data, opinions, viewpoints, etc.)	Demographic data: Age, level of ephemeral media use Qualitative interviews
Estimated amount of time required of participants in your study (per participant)	5-10 minutes for interviews 3 minutes to fill out consent and demographic forms, ask parents to sign

1. Briefly Describe Your Confidentiality of Data and Privacy Protection:

No names will be collected for the study within consent forms and the qualitative data interviews. Email groups will be under BCC and will not be recorded for any purposes other than providing materials needed for the study. No voice data will be used, I will only use Otter.ai's voice transcription tool.

2. Briefly Describe how participants will provide Informed Consent:

They will fill out a consent form prior to the study, as well as signing an Adobe Sign

consent form with their parents.

3. Briefly Describe Any Known Risks to Participants:

Admitting illegal behaviors done in the past.

4. Briefly Describe Any Known Benefits to Participants

Awareness on the negative affects of their ephemeral media use
Reflecting on their own, possibly irresponsible behavior online
Improving their digital footprint and raising privacy concerns²

ATTACHMENTS

Keep all that apply to your proposal. Hyperlink these documents as they become made available. Be sure the permission settings are set to “anyone with a link may view”

- ☐ Participant Informed Consent Form
The intent of these letters should be to secure informed consent from participants that will be researched.
- ☐ Parent Consent Form for Participants Under Age 18 (if applicable)
Attach a copy of a proposed letter to parents. The intent of this letter should be to secure informed consent from the parents for their child's participation in the research. If the study design includes a treatment group and a control group, be sure that the consent letter is appropriate for either group assignment, or write one version of the consent letter for potential treatment group students and one version for potential control group students.
- ☐ Research methods (research design, data source, sampling strategy, etc.)
- ☐ Questionnaires, surveys, interview questions or other data-gathering forms

CERTIFICATION AND SIGNATURES

In making this application, I certify that:

I understand that any unauthorized disclosure of confidential information is illegal as provided in the United States of American Family Educational Rights and Privacy Act of 1973 (FERPA) and in the implementing federal regulations found in 34 CFR Part 99. I understand that participation in a research study by students, parents, and school staff is strictly voluntary. In addition, I understand that any data, datasets or outputs that I, or any authorized representative, may generate from data collection efforts throughout the duration of the research study are confidential and the data are to be protected. I will not distribute to any unauthorized person any data or reports that I have access to or may generate using confidential data. I also understand that students, schools, or the district may not be identified in the research report. Data with names or other identifiers (such as student numbers) will be disposed of when their use is complete. I understand that acceptance of this request for approval of a research project in no way obligates SAS High School and/or SAS Middle School or Elementary School to participate in the research. I also understand that approval does not constitute commitment of resources or endorsement of the study or its findings by SAS High School, or by the Board of Governors. If the research project is approved, I agree to abide by standards of professional conduct while working in the schools. I understand that failure to do so could result in termination of the research study. I understand that the study is not complete until this report has been provided to the SAS High School Institutional Review Board.

Name of Student _____
 Researcher

Signature of Researcher _____

Date 13 April 2022_

Approval by Quest Advisor

I confirm the accuracy of this application. I accept responsibility for the conduct of this research, the supervision of any human participants, and the maintenance of informed consent documentation as required by the IRB.

Name of Supervising _____
 SDS Quest Advisor

Signature of _____
 Supervising SDS Quest
 Advisor

Date _____

Appendix C: Research Inquiry Proposal Form (IPF)

Research Inquiry Proposal Approval Form (IPF) QUEST EDITION

This is a digital version of the student handout in the AP Research Course and Exam Description published in 2020. It has been modified slightly for Quest to help students at both levels of research (AT and non-AT) know which sections must be completed for your study to be approved by the Quest Advisors. Each student must work with their SDS Advisor to complete this form in order for the project to be approved. Provide as much detail as possible and whenever appropriate provide hyperlinks for all documents/sources needed to complete the form.

Note: Any student wishing to submit their research to College Board, MUST have this form signed and it MUST be kept on file by your AP Research Coordinator for no less than one (1) year.

Instructions:

- ☐ Complete all required sections prior to your Research Proposal Presentation.
- ☐ Submit this completed document to Teamie by Nov. 30 (A)/Dec. 1 (B) *This is non-scored but a requirement.*

Helpful resources to guide your completion of this required form can be found on the [SDS webpage](#)

All Students:

1. State your research question and the project goal (purpose of your study):

RQ: How does online ephemeral media encourage the reckless offline decision-making behaviors of teenaged international students in Singapore?

The purpose of my study is to find the gap that resides within the existing research that shows that the habitual use of ephemeral media has a negative effect on one's **online** decision-making behaviors. My research will find the extent to which it affects one's **offline** decision-making behaviors as well, so as to raise awareness on the harmful effects of the overuse of apps like Snapchat that plagues our youth today. I hope that my research will help inspire school curriculums to teach their students more about digital professionalism and one's digital footprint as well, as it is increasingly becoming a major facet of our lives and employment practices, college admissions, and criminal histories.

All Students:

2. Describe three key studies that have informed your understanding of the scholarly conversation surrounding your topic. (*note: refer back to your Literature Review for these sources*)

1. Guraya et al.'s 2021 research
 - Studied young medical students with a qualitative, grounded theory assessment, which I adopted in my study
 - Found that these students sacrificed professional integrity and medical code of conduct just to talk about or post their patient's private information on ephemeral media
 - 80% of habitual users in this participant group did not own concerns for patient's privacies as a result
2. Boudlaie et al.'s 2019 research
 - Aimed to understand the key issues in the use of digital footprint in recruitment

- Used a thematic analysis research method, which I adopted in my study
 - Digital footprint becoming increasingly prevalent in job hiring processes
 - Hiring managers now use social media to find reasons not to hire an applicant
3. Xu et al.'s 2018 research
- Used qualitative, personal interviews that I adopted in my own study
 - There is an unspoken negotiation around saving ephemeral media that is sent to others, the trust in others to adhere to this is the user's "safety barrier"
 - People are more likely to treat these ephemeral media outlets differently as a result

AT Research Students Only:

3. Identify the gap addressed by your proposed research, and explain how the gap is situated into the scholarly conversation. Provide sources to justify the gap your proposed research is addressing.

Prior research suggests that perceived ephemerality lowers concerns of personal privacy (Morlok et al., 2017) and one's digital footprint (Boudlaie, 2019), and that the habitual use of social networking sites adversely affects behavioral relations by influencing new companions to share content, pictures, sounds, recordings among them, allowing for a widespread network between these adolescents (Akram & Kumar, 2017). We also know that one's lack of self-control in their online presence encourages themselves and others to continue this behavior, creating a "domino effect" and exponential increase of imprudent online behavior (Du et al., 2021). However, past research fails to recognize if the combination extends to offline behavior as well.

Therefore, the gap in my research is to identify the extent to which habitual ephemeral media use affects the **offline** decision-making behaviors in teenagers without the influence or temptations of posting on online ephemeral media. Finding this gap and confirming the notion that there is an increase of risky day-to-day decision-making as a result of the habitual use of such media will contribute to future research that can explore the exact negatively impactful facets that this type of media encourages. My research will also explore **international school students in Singapore** as participants, narrowing this research to a specific group of people (of which already have cases and examples that support the RQ's theory).

All Students:

- 4a. Describe your chosen or developed research method.

AT Research Students Only:

- 4b. Defend its alignment with your research question.

My chosen research method is a qualitative, grounded-theory thematic analysis. I chose this as it combines elements of my three main research studies that have contributed greatly to my literature review and my initial research to develop my research question [(Guraya et al., 2021), (Boudlaie et al., 2019), and (Xu et al., 2018)]. Because my research question implies that there is already a theory regarding the notion that online ephemeral media *does* encourage reckless offline decision-making behaviors in teenagers, a grounded-theory method would allow me to develop this theory rather than conclude it with factual information, as the data that the study will be using will be based on personal inquiry. This qualitative data is appropriate for my study as a reflection on personal insights, stories, and confessions are necessary for the participants to determine whether they believe their use of ephemeral media has influenced their day-to-day behavior, and this is hard to find out through quantitative or objective data. Most of the resources I used in my literature review used only or included qualitative data in their studies. After compiling the data, the use of a grounded-theory method allows me to extract concepts from the qualitative data to develop into a whole, which I will later employ a thematic analysis to organize my data based on themes of answers so as to get conceptual conclusions from the study.

All Students:

5. Identify additional approval processes (*use the highlighter function to check all that apply*)

- ☐ Human Subjects [requires additional IRB review and approval if a student wants to publish and/or present publicly (outside an AP Research course context). *If student does not plan to publish their paper other than to AP Research, no IRB is needed.*
- ☐ Animal Subjects [requires additional review or approval by school/district process]
- ☐ Harmful microorganisms [requires additional review or approval by school/district process]
- ☐ Hazardous materials [requires additional review or approval by school/district process]
- ☐ No additional review or approvals needed

All Students:

6. Explain how your proposed method complies with ethical research practices.

This proposed method would have a strong emphasis on anonymity. Participants will sign a release agreement detailing that all their personal answers are confidential to the researcher. As the data will be collected through in-person interviews, there will be no harm inflicted upon any participating member, and only a conversation will be necessary to collect it. Ethical research practices will be employed in sufficiently briefing the participant of the research objective and articulating an anonymity agreement, as well as debriefing each participant after the study. Data collected from the study will be sealed and confidential to the researcher as proposed in a Participant Informed Consent Form as well as a Parent Informed Consent Form. Names will not be recorded, and no identifying data will be used for the study. Transcripts and recordings of interviews and other digitalized data will be sealed in a locked folder on a password-protected computer.

All Students:

7. Describe the data that will be collected or generated from your study to answer your proposed research question and/or achieve your project goal.

The data collected will be from qualitative interviews that will be hosted by the researcher. This will first include a survey that will be given to the participant detailing their number of hours using ephemeral media per day, and their perceived concern for privacy issues such as their digital footprint and online presence. This will be used in order to categorize participants based on their level of use with ephemeral media so that I can compare the results of those with higher use of ephemeral media with those who use it less regularly. Then, the qualitative interview will begin, where I will encourage participants to share any confessions about their past negative decision-making as an effect of the influence of ephemeral media, what they have posted on ephemeral media that they shouldn't have, and why they think they did as such. I will then ask them if they believe the habitual use of ephemeral media has affected their day-to-day decision-making, and encourage them to share any experiences they've had where they've done something dangerous, illicit, or irresponsible as a result of seeing something similar on ephemeral media or if they think ephemeral media's effects have translated onto their real-life decision-making behavior and a lower guard for personal privacy. This may come in the form of digital unprofessionalism (like in Guraya et al.'s 2021 research), sharing private information in-person, etc.

All Students:

- 8a. Describe the way you will analyze the data or additional scholarly work produced/generated by your method.

AT Research Students Only:

8b. Justify its alignment with your research question or project goal.

I will first transcribe my voice recordings of the interviews and then read through and categorize them based on themes of answers. I will corroborate each section of an answer with their respective level of use of online ephemeral media. I will then compare the answers to see if there are differences between those who use ephemeral less or more often than their counterparts. I will extract concepts from my collection and categorize data so as to develop the theory in my research question.

This assessment works for my research question and project goal as it allows me to find valuable, real-life experiences as data within my small subset of participants (Singapore international students, ages 15-18). Because my research question includes the theory that online ephemeral media *does* affect offline decision-making behaviors, and is exploring specifically the “extent to which” this theory is true rather than “if” this theory is true, analyzing my data with the method articulated above will allow me to develop the conceptual theory rather than find concrete evidence to prove it, allowing for a more accurate and appropriate piece of research.

All Students:

9. List any equipment, resources, and permissions needed to collect data or information.

Optional, if available:

If available, attach (via link) the initial drafts that apply to your proposal if engaged in participant research or human subject research: informed consent form, surveys, interview questions, questionnaires, or other data gathering forms; or letters/flyers that will be distributed to study subjects.

1. Informed consent form & anonymity/release agreement
2. Eight \$20 gift cards

- Recruit participants by selecting 2 students from each grade at an international school, one male, one female, in each age group: 15, 16, 17, 18.
 - Not randomly selected as it is not expected to hinder results of the survey, and has a specific criteria for each participant.

All Students:

10. Describe the anticipated logistical and personnel challenges for your research project (to collect and analyze data or to pursue research methods appropriate to a paper that supports performance/exhibit/product).

Anticipated challenges:

- Not enough participants/too many participants and data to efficiently collect and analyze
- Participants are uneven in levels of use of online ephemeral media per day
- Unable to find strong correlation between variables in the research study
- Cherry-picking aspects of each method I want to include, resulting in an inaccurately defined method in my product

All Students:

11. Provide a brief timeline that outlines your process from the start of Semester 2 (January 17) through the project completion by early March (note: final academic paper is due March 18).

January

- Begin drafting informed consent forms, anonymity/release agreement

- Begin articulating specific questions that will be used during qualitative interviews
- Test out one participant with the given interview questions and process (will not be used in final research). What went well/didn't go well? Do I need to ask more questions/less time for the interview? Did I get the data I intended on getting?
 - After this, reevaluate and re-draft based on necessity

February:

- 10-13 Feb: Finalize plan, reach out to interviewees.
- 14-22 Feb: Begin and complete interviews
- 23-28 Feb: Analyze data, organize based on themes, draw correlations and conclusions

March:

- March 1-4: Start writing the conclusion and limitations of my research paper.
- March 5-10: Proofread, cite sources, and polish final drafts. Plan to have it ready before the due date so I can tweak the timeline if necessary.
- Turn it in!

All Students:

12. Discuss the anticipated value and/or implications of your research project.

By helping to find the gap and effects of habitual online ephemeral media use, we can use this to spread awareness and educate today's youth on the topic. It is known that teenagers are most susceptible to outside influences affecting their decision-making, so more knowledge on the topic and its effects with a negative digital profile will encourage parents and institutions alike to raise education for their youth on the matter. This, in turn, will prevent the harmful effects already known to come from such media use, such as a negatively impactful digital footprint, preventing employers and institutions from barring one from admission or employment based on their online activity. This will also help to safeguard private information, pictures, and media from initially being put out onto the internet and into the hands of other people, ultimately improving safety measures on digital platforms that are taking over our world today.

Quest Advisors' Feedback:

- ☐ Approved
☐ Approved with Recommendations
☐ Not Approved Yet

SDS Quest Advisor
approval (Signature)

Name:

Approval Date:

Signature:

AT Students Only: AP Research Coordinator (Signature)	Name: _____ Signature: _____ Approval Date: _____
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Appendix D: Participant Consent & Confidentiality Agreement

Title of Study: How does online ephemeral media encourage the reckless offline decision-making behaviors of teenage international students in Singapore?

Name:		Dept:	SAS Quest	Phone:	+XX XXXXXXXX
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Introduction

- You are asked to participate in an interview that questions your perceptions of your online presence, behavior, and ephemeral media use
- You were selected as a possible participant because you meet the researcher's criteria based on age group, your position as an international student in Singapore, and your gender.
- We ask that you read this form and ask any questions that you may have before agreeing to be in the study.

Purpose of Study

- To see if the habitual use of online ephemeral media has an effect on one's offline decision-making behaviors.
- Promote awareness, education, and prevention of these effects.

Description of Study Procedures

If you agree to be in this study, you will be asked to do the following things:

- Sign both the participant consent form and the digital parent consent form.
- Respond to an initial online survey to define key terms, determine your level of ephemeral media use, and determine your initial level of concern for both personal privacy and online presence.
- Answer questions **anonymously** in an in-person interview.
- Sign a release and debrief form.

Risks/Discomforts of Being in this Study

- The study has the following risks that one should evaluate before signing this consent form. First, choosing to admit to illegal behavior and participating in an anonymous survey may cause discomfort depending on the participant. The researcher is also obligated to report any serious crimes or anything that would hurt oneself or others.
- The study will also ask for personal information surrounding one's actions on ephemeral media and risky behavior. This may cause discomfort depending on the participant.
- Participants will be encouraged to have full honesty in their responses. As such, personal or intimate information may be shared. This will be strictly confidential to the researcher, and the researcher will not have any judgement towards any response. This may cause discomfort depending on the participant.

Benefits of Being in the Study

- Increased awareness of one's risky online behaviors and how it affects one's real-life, offline behavior.

- Increased awareness surrounding digital profiles, personal privacy, and the negative effects of ephemeral media.
- Participation in the global stride for more education in schools regarding online behavior, privacy practices, and digital profiles.

Confidentiality

- The records of this study will be kept private to the researcher. Voice recording transcripts will be kept in a locked file on a password-protected computer. Names will not be recorded during the study, and the participant's identity will be private to the researcher, as will be agreed by both parties on this consent form. Only one's age, location, and gender will be recorded. We will not include any information in any report we may publish that would make it possible to identify you.

Payments

- You will receive a \$20 Amazon gift card as an incentive for participating in this study.

Right to Refuse or Withdraw

- The decision to participate in this study is entirely up to you. You may refuse to take part in the study *at any time* without affecting your relationship with the investigators of this study. Your decision will not result in any loss or benefits to which you are otherwise entitled. You have the right not to answer any single question, as well as to withdraw completely from the

interview at any point during the process; additionally, you have the right to request that the interviewer not use any of your interview material.

Right to Ask Questions and Report Concerns

- You have the right to ask questions about this research study and to have those questions answered by me before, during or after the research. If you have any further questions about the study, at any time feel free to contact me, XXXXX, at XXXXX@XXX.edu.sg or by telephone at +65 XXXXXXXX. If you like, a summary of the results of the study will be sent to you. If you have any other concerns about your rights as a research participant that have not been answered by the investigators, you may contact Jason Adkison, Co-chair of the Singapore American School Institutional Review Board at +(65) 6363 3403.
- If you have any problems or concerns that occur as a result of your participation, you can report them to Jason Adkison at the number above.

Consent

- Your signature below indicates that you have decided to volunteer as a research participant for this study and that you have read and understood the information provided above. You will be given a signed and dated copy of this form to keep, along with any other printed materials deemed necessary by the study investigators.

Subject's Name (print): _____

Subject's Signature: _____ Date: _____

Investigator's Signature:

Date:

Appendix E: Parent Consent Form

Parent Informed Consent Form

I am a student researcher at SAS studying the effects of habitual ephemeral media use in teenaged students. Your child was selected to participate in a student-designed research study based on their age, gender, and their position as an international school student in Singapore. A consent form is necessary for participation as your child is under 18 years of age, and the content that will be discussed in the interview may be sensitive to some individuals. All information entered below will NOT be used as research data and will be kept strictly confidential to the researcher, and will only be used as parent notification of their child's participation. Please read all items below before signing this parent consent form.

Email *

Valid email

This form is collecting emails. [Change settings](#)

About the Study

The researcher is a student at SAS taking the AT Research course, which allows students to design their own study, execute it, and submit their research to publish or for AP credit. Students aged 15-18 have been selected to participate in an in-person interview during school hours to answer questions regarding their habits on ephemeral media ("disappearing" media that allows one to post or send a picture or video that will disappear once opened or after 24 hours, such as Snapchat, Instagram stories, etc). Because using media with disappearing features tends to lower a privacy guard in individuals, often prompting them to engage in more "risky" behavior online, the research aims to find the long-term effects of this habitual ephemeral media use on offline, in-person behavior. The research intends to ask: have the habits formed from habitual ephemeral media use affected an individual's decision-making in real life situations?

As such, the researcher will be asking the participant interview questions that encourage them to be honest and unfiltered, asking them about their in-depth perceptions of their own behavior online and the concern that surrounds them. During the interview, the participant may choose to admit to past risky behaviors regarding ephemeral media (illegal activity, intimate or private information, etc) and will be encouraged to elaborate on their decision-making processes behind them. Parent consent forms are needed to acknowledge the risk for a minor to participate in such an interview.

The study's data, however, is strictly confidential to the researcher. Any identifying information of the student will NOT be recorded nor included in the research paper, the researcher and student will sign a confidentiality agreement, and all data collected from the study will be placed in a locked folder on a password-protected computer. Though this form will collect identification data of the participant and parent, it will NOT be used as research data and is purely for guaranteed protection of the participant, and is private and accessible ONLY to the researcher. The participant will also receive a compensation of a \$20 Amazon gift card for their time. Please let the researcher know if you are not comfortable with your child's participation, or have any questions regarding the study:

Isabella Wesson
wesson786293@sas.edu.sg
+65 9877 4735

Student's Name (First, Last) *

Short answer text

By typing a printed signature (First, Last) below, I acknowledge that I have read the summary above and consent to my child's participation in this student-designed research study. *

Short answer text

Appendix F: Pre-Interview Survey

Pre-Interview Survey

Please read the following definitions of key terms that will be brought up during the interview:

Ephemeral media: Any pictures, videos, or media that is "disappearing" (deleted after the receiver opens it or 24 hours after it is posted, like Snapchat, Instagram stories, Whatsapp's disappearing texts).

Risky behavior: Any action that risks one's safety, privacy, or engagement any illicit activity, both online and in real-life.

Decision-making (in regards to ephemeral media): The mental process of deciding to post or send a piece of ephemeral media.

Stories: A feature of social media that allows you to post a picture or video for your followers to view that will be deleted in 24 hours or when manually removed. "Private stories" are set by the profile owner to have an audience of a smaller subset of followers, usually comprised of one's closer friends.

Age *

- ☐ 15
- ☐ 16
- ☐ 17
- ☐ 18

Sex *

- ☐ Male
- ☐ Female

I am an international school student in Singapore. *

- ☐ Yes
- ☐ No

How many total hours per day do you use ephemeral media? (Snapchat, Instagram stories, etc) *

- ☐ Under 1 hour
- ☐ 1-2 hours
- ☐ 2-3 hours
- ☐ 4-5 hours
- ☐ Over 5 hours

How often per week do you use ephemeral media? (Snapchat, Instagram stories, etc) *

- ☐ Every day
- ☐ Most days of the week
- ☐ A couple/a few days a week
- ☐ One day a week
- ☐ I do not use ephemeral media

I think about the effects of what I post on social media. *

	1	2	3	4	
Strongly Disagree	☐	☐	☐	☐	Strongly Agree

I think about the effects of what I post on my Snapchat story, private story, close friends story, etc. *

	1	2	3	4	
Strongly Disagree	☐	☐	☐	☐	Strongly Agree

I make sure to take safety measures when posting or sending something online. *

	1	2	3	4	
Strongly Disagree	☐	☐	☐	☐	Strongly Agree

I trust my friends to not save or screenshot something personal, intimate, confidential, or illegal I've sent to them on iMessage or Whatsapp. *

	1	2	3	4	
Strongly Disagree	☐	☐	☐	☐	Strongly Agree

I trust my friends to not save or screenshot something personal, intimate, confidential, or illegal ^{*} I've sent to them on Snapchat.

	1	2	3	4	
Strongly Disagree	☐	☐	☐	☐	Strongly Agree

Sending something personal, intimate, confidential, or illegal is safer on apps like Snapchat than ^{*} it is on apps like iMessage.

	1	2	3	4	
Strongly Disagree	☐	☐	☐	☐	Strongly Agree

I often think about how my social media profiles represent a positive image of me to future ^{*} employers.

	1	2	3	4	
Strongly Disagree	☐	☐	☐	☐	Strongly Agree

I often think of protecting my own safety in real-life when I share personal information on social ^{*} media.

	1	2	3	4	
Strongly Disagree	☐	☐	☐	☐	Strongly Agree

Ephemeral media influences my decisions. ^{*}

	1	2	3	4	
Strongly Disagree	☐	☐	☐	☐	Strongly Agree

I know of the negative affects of ephemeral media has on my privacy guard, digital profile, and ^{*} personal safety.

	1	2	3	4	
Strongly Disagree	☐	☐	☐	☐	Strongly Agree

Appendix G: Interview Questions

INTRODUCTION

The purpose of this interview is to gather information from students about their experiences with ephemeral media. In this interview, anything that you say will be strictly confidential, and though some quotes and information you share will be embedded into my research paper, no identifying information will be included. This interview should last 20 minutes. Therefore, we ask you to be completely honest with your answers and elaborate on them as much as possible. We will ask you a series of questions and may follow up based on your responses. If you feel uncomfortable at any point and would like to end the interview, let the researcher know and we will stop and remove you as a participant from the study.

QUESTIONS

1. Ephemeral media in the context of social media is any picture, videos, or media that is "disappearing" (deleted after the receiver opens it or 24 hours after it is posted, like Snapchat, Instagram stories, Whatsapp's disappearing texts). Do you consider yourself a habitual ephemeral media user?
 - a. *Clarification definition:* You use apps like Snapchat or look at Instagram stories multiple times a day – it has become a routine or a consistent behavior.
2. Think about what you post online. Has anything you've posted of yourself or others been illegal or risky (anything of personally revealing, illegal, intimate, private, or of dangerous nature)? Give me a few examples.
 - a. Tell me about your decision-making process to post this material and the difference between posting it on your story (or other ephemeral media) or your main feed.
3. Are you more likely to post something risky on a private or close friends story? Why or why not?
 - a. If the participant doesn't have a private or close friends story: Do you see this behavior exemplified in your peers?

4. Why do you believe others post risky, illegal, inappropriate, private, or embarrassing content on ephemeral media? What are the motivations behind posting such media over keeping it to oneself?
5. Have you ever engaged in risky behavior for the sole purpose of being posted on ephemeral media (Snap stories, Insta stories)? Why or why not? Elaborate on your experiences.
6. Have you ever participated in any online trend for the sole purpose ephemeral content/to be a part of the trend (both posting and being the subject of a post)? If so, can such behaviors be considered “risky”? Why did you participate or why do you think others participate? For example,
 - a. In my feelings challenge (dancing to “KeKe, do you love me?” by hopping out of the car while it is moving), Andy’s Coming (Dropping to the floor in class when someone calls “Andy’s Coming!”), or anything of this nature
 - b. Drinking/smoking challenges or games
 - c. Dangerous trickshots, jumping off roofs into pools, etc.
7. If you could not/did not have the option to post (for example, a video of you jumping off a roof into a pool) on Snapchat or your Instagram story, would you still engage in this behavior on your own?

8. To what extent do you believe that the influence of being able to post on Snapchat, Instagram Stories, or other ephemeral media outlets influence your day-to-day actions and decisions?
9. What online AND offline habits have you formed from consistently using ephemeral media? (Specifically, regarding privacy concerns and privacy guard, digital professionalism, and dangerous or risky behavior)
10. Prior research suggests that perceived ephemerality lowers concerns of personal privacy (Morlok et al., 2017) and one's digital footprint (Boudlaie, 2019), and that the habitual use of social networking sites affects behavioral relations between adolescents that create a widespread network of content sharing. As such, a number of adolescents sharing risky content can influence another adolescent to follow. Unspoken negotiation rules about not saving others' content on ephemeral media, like the social norm to not save "personally revealing" content, personal, or embarrassing material on Snapchat is also proven to lower a privacy guard in individuals (Xu et al., 2018), thus having the effect of these users engaging in this behavior more often. This norm also makes it easier for one to engage in illicit activities, like selling drugs. Do you agree? How have you seen this behavior in yourself and your peers?
 - a. Does this risky behavior online encourage risky behavior offline? Elaborate.

11. Do you believe that you are more likely to repeat the behaviors you've learned from consistently using ephemeral media and exemplify them in real-life? (i.e., posting a harsh description of a political candidate on your Snapchat story where acquaintance can see, and later having unfiltered speak about the same topic in real-life with an acquaintance)
12. Do you believe education on ephemeral media's effects, such privacy practices, and digital professionalism has been adequately provided to yourself and your peers?
13. Do you have anything else you'd like to let me know that helps this research?