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Shohil Kishore

*The University of Auckland, s.kishore@auckland.ac.nz*

David Sundaram

*The University of Auckland, d.sundaram@auckland.ac.nz*

Lech Janczewski

*The University of Auckland, lech@auckland.ac.nz*

K.Dharini Amitha Peiris

*The University of Auckland, a.peiris@auckland.ac.nz*

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# **Vulnerable Groups Online: Understanding Engagement with Facebook, Instagram and Snapchat**

*Completed Research*

**Shohil Kishore**

The University of Auckland  
s.kishore@auckland.ac.nz

**David Sundaram**

The University of Auckland  
d.sundaram@auckland.ac.nz

**Lech Janczewski**

The University of Auckland  
l.janczewski@auckland.ac.nz

**K.Dharini Amitha Peiris**

The University of Auckland  
a.peiris@auckland.ac.nz

## **Abstract**

Understanding the societal impact of IT use is a critical step towards preventing harmful activities online. In particular, Vulnerable Groups [VGs] using Social Media Platforms [SMPs] are exposed to a variety of risks. Our research aims to understand how a particular VG, adolescent females, engage with Facebook, Instagram and Snapchat differently. Qualitative analysis of 22 semi-structured interviews reveals that the platform, tangible authority figures, risk normalization and risk awareness collectively influence how this group engaged with SMPs. With a low presence of adults and a high presence of their own peers, the participants engaged with Instagram and Snapchat to a greater extent than Facebook. In addition, high-risk disclosures were more likely to occur on Instagram and Snapchat as the participants felt more comfortable with expressing themselves openly on these platforms. Findings and future research directions are discussed.

## **Keywords**

Social Media Research, Vulnerable Groups, Risk, Facebook, Instagram, Snapchat.

## **Introduction**

Social Media Platforms [SMPs] play a significant role in enabling bilateral conversation online by displacing, integrating and remediating a number of previously separate functions such as forums, instant messaging and blogs (Livingstone, 2008). While SMPs enable global connectivity, there are groups for whom SMPs pose numerous risks along with the benefits that they offer and the needs that they fulfill (Allen et al. 2014; Vannucci et al. 2020). The focus of our research is on such Vulnerable Groups [VGs] and their use of SMPs. We conceptualize VGs as a group of individuals that are particularly vulnerable to psychological, reputational, or physical harm as a result of engaging in online activities (Buglass et al. 2017; Davidson and Martellozzo 2013).

In general, SMPs are deeply intertwined with the lives of users. However, there is an argument that females as a group use SMPs differently to males (Fogel and Nehmad 2009; Hargittai and Hsieh 2010). For instance, while females are more likely to actively use SMPs to maintain close relationships, they are also more likely to self-regulate online disclosure due to the risk of harassment (Krasnova et al. 2017). Gender, however, is not the only factor influencing SMP usage behavior (Hargittai, 2002; Hargittai & Boyd, 2010). In particular, adolescents today have greater access to SMPs (Burnell and Kuther 2016), are more likely to expose themselves to risk online (Marwick and Boyd 2014) and are more likely to adopt specific SMPs such as Instagram and Snapchat (Cao et al. 2020). Furthermore, as the majority of social media research within the field of Information Systems focuses on Facebook (Kapoor et al. 2018), the intricacies associated with other platforms tend to be ignored. Therefore, social media research must

consider the characteristics of VGs alongside the design of different SMPs, which together give rise to engagement in high-risk activities both online and offline (Vannucci et al. 2020).

Adolescent females represent a particular VG as recent research demonstrates that they are particularly susceptible to the negative effects of SMPs, such as developing eating disorders and body dissatisfaction (Saunders and Eaton 2018), experiencing cyberbullying (Smith 2019) and developing problematic use patterns as well as depressive symptoms (Raudsepp and Kais 2019). Creating a safer online environment for VGs closely aligns with the AIS grand vision of an ICT-enabled Bright Society (Lee 2015), an initiative which calls for Information Systems researchers to move beyond business and management research, and instead investigate issues of societal importance. Therefore, exploring this groups utilization of SMPs and engagement with online risk proves to be an important step towards creating a safer online environment.

The rest of the paper is organized as follows. The Literature Review section evaluates the literature around adolescents, gender and SMP use which forms the basis of our exploratory research questions. The Methodology section summarizes our qualitative research design and methodology. The Findings section includes in-depth discussions around the findings and themes. Lastly, the Conclusion summarizes the study and discusses future research directions.

## Literature Review

### *Adolescents, Privacy and Online Risk*

With over half of American teenagers adopting and regularly using Facebook and Instagram, and over 40 percent of teenagers regularly using Snapchat, SMPs have become the predominate method of adolescent communication online (Lenhart 2015). Smartphones today, accessible to 73% of teenagers, create an environment where the Internet and mobile phones are synonymous. Constant immersion in such an environment impacts perceptions and impulsivity online, potentially increasing the risk of harm (Beckman et al. 2013).

The topic of adolescent technology usage and immersion has drawn significant academic attention (Antheunis et al. 2016). Younger users tend to be particularly susceptible to risks such as cyberbullying (Fahy et al. 2016), sexual solicitation (Schulz et al. 2016) and harassment (Subrahmanyam and Greenfield 2008; Ybarra et al. 2007). Some argue that adolescents expose themselves to risk more often as their own sense of privacy is not yet fully developed (Marwick and Boyd 2014). Additional evidence suggests that adolescents often blur the line between their public and private lives when using SMPs, leading to over-disclosure (Christofides et al. 2009). In combination with the fact that SMPs are designed to encourage disclosure (Rosen et al. 2010) and adolescents today have grown up with technology as an integral part of their lives (Vodanovich et al. 2010), adolescent behavior online is strongly mediated by SMPs.

SMPs create an environment where users may assume a false sense of privacy which encourages deeper levels of engagement (Shane-Simpson et al. 2018). While this is not exclusive to adolescents, they are more likely to underestimate the repercussions associated with risky activities (Moore and Gullone 1996), especially when their peers advocate such behavior (Burke et al. 2009). In addition, adolescents often engage in imaginative audience behavior which suggests that they tend to be preoccupied with their appearance as they overestimate the extent to which others are evaluating their actions (Elkind and Bowen 1979; Valkenburg et al. 2006). Furthermore, as adolescents are frequently exposed to environments mediated by SMPs (Livingstone and Smith 2014), they quickly begin to experience the benefits associated with disclosure, which in turn, shape the norms that they familiarize themselves with and grow accustomed too (Christofides et al. 2009). This may gradually change the behavior of adolescents subsequently resulting in a diminished value of privacy (Sherman et al. 2018).

Others disagree with this argument, claiming that adolescents possess a complex sense of privacy and are intensely interested in the information that they disclose online (Livingstone 2008; Madden et al. 2013). Instead of their privacy being strongly tied to the information that they share, adolescents instead focus their attention on who has access to their information (Tufekci 2008). This does not necessarily mean that they are interested in the implications imposed on them by abstract establishments (i.e. SMP providers), however, it does suggest that adolescents are concerned with tangible authority figures (West et al. 2009) having access their information as it disrupts their ability to experiment with their sense of self in a social

context that is both exciting yet comparatively safe, and visible to peer groups more so than adults (Boyd 2008; Buchner et al. 1995; Livingstone 2008).

### *Gendered Interactions Online*

Previous research has discussed that SMPs are mainly used to form and maintain weak-ties (Steinfeld et al. 2012; Vanden Abeele et al. 2018). While SMPs may not increase the number of strong-ties possessed by a user, it does provide users with an inexpensive, simple and accessible method of managing a large heterogeneous network of weak-ties and enables users to establish relationships that may have otherwise remained ephemeral (Donath and Boyd 2004; Wellman et al. 2001). Combined with the Internet's entertainment capabilities, users may be distracted during in-person communication, potentially displacing critical interactions with strong-ties (Burke et al. 2011; Kross et al. 2013; Teppers et al. 2014).

Females, however, are more likely to be 'Omnivores' (Hargittai and Hsieh 2010). Omnivores have multiple SMP accounts and use those accounts intensely. As indicated above, excessive Internet and SMP usage are likely to result in less communication with strong-ties and more communication with weaker online ties (Vriens and van Ingen 2018). In contrast, females pursue significantly more strong-tie activities and less weak-tie activities than males when using SMPs (Barker 2009; Hargittai and Hsieh 2010; Krasnova et al. 2017). This is in agreement with the literature which states that females are more likely to use the Internet to remain closely connected with strong social ties (Joiner et al. 2005; Newman et al. 2007) and use SMPs to discuss relationships, secrets and deep feelings (Lenhart et al. 2001).

As demonstrated, gender differences online have been heavily researched (Bruns and Stieglitz 2012). However, these differences are amplified when viewed from the perspective of adolescent females. Adolescent females in particular are more active on SMPs except Facebook (Beckman et al. 2013), and are more likely to deeply trust specific SMP platforms such as Instagram (Shane-Simpson et al. 2018). This in turn has an impact on privacy concerns, as intense SMP users tend to have lower privacy concerns than those that primarily use SMPs to maintain a network of weak-ties (Phua et al. 2017). When considering their heightened exposure to risk in combination with their more frequent usage of multiple SMPs, adolescent females represent a particularly susceptible VG. Thus, understanding this group's utilization of SMPs requires further research, motivating our exploratory research questions:

1. How do adolescent females respond to risk on SMPs?
2. Do adolescent female's perceptions and behavior differ between SMPs?

## Methodology

### *Research Design*

Utilizing a post-positivist epistemology, this study adopted a qualitative interview methodology to explore the research questions. To strengthen the overall research design, the dramaturgical model was adopted as a research guideline (Goffman 1959; Myers and Newman 2007). This model uses the metaphor of the theatre to explore social life and is particularly applicable to the qualitative interview as they both represent a specific type of social interaction. The development of the semi-structured interview script was driven by the research questions and followed by multiple rounds of internal testing with the co-authors. Once agreed upon, pilot interviews were conducted, and adjustments were made prior to finalizing the script.

### *Participants*

22 individuals between the ages of 16 and 20 participated in this study. All participants identified as female. Half of the sample were studying at high school (11<sup>th</sup> and 12<sup>th</sup> grade) while the others were studying at university (first and second year). 15 of the 22 participants identified as ethnicities other than European and 10 of the 22 participants were born overseas. Every participant had access to high-speed Internet at home and owned a smartphone. Most participants also owned or at least had access to a laptop or tablet as well.

## Data Collection and Analysis

To solicit participants, a high school was contacted to seek approval and gain access to their respective students and an advertisement was attached to multiple noticeboards in two universities. During the interview, the interviewer generally aimed to sustain a free-flowing, open-ended discussion by listening in an interested yet relaxed manner (McNamara 2009). A pseudonym was assigned to each participant to maintain anonymity. Each interview was electronically recorded, transcribed by a professional third-party organization, and checked for accuracy by the respective interviewee.

Systematic analysis of the interview transcripts occurred in two phases. First, electronic and manual methods were combined to effectively code the data (Welsh 2002). NVivo 12 was used for coding, data organization and data analysis in conjunction with manual methods to fully understand how the coded text linked together. On completion, thematic analysis was used to identify representative themes and sub-themes. The themes were iteratively reviewed and evaluated in conjunction with the research team.

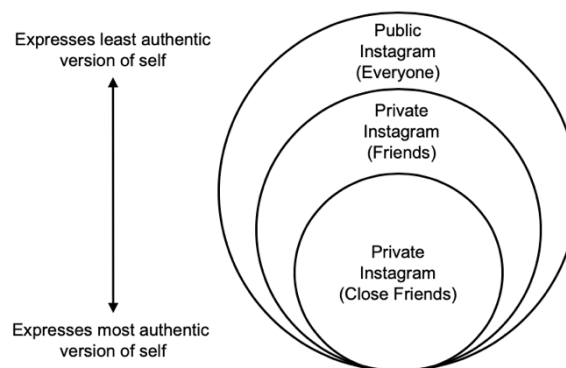
## Findings

Four themes emerged during analysis. This includes Online Authenticity, Peer Exclusion, Perceived Visibility (with sub-themes of Family and Other Authority Figures) and Risk (with sub-themes of Risk Normalization, Risk Awareness and Risk Exposure). Each theme and sub-theme are discussed in detail below.

### Online Authenticity

A core theme of the study revealed that the participants possessed a complex sense of privacy which changed based on several factors, including the platform being used. For instance, each of the 22 participants possessed a Facebook account. However, both Instagram and Snapchat were used more frequently and more in-depth than Facebook, revealing inconsistent usage and adoption patterns. Furthermore, out of the ten participants that possessed public Instagram accounts, six also admitted that they were uncomfortable with their information being publicly accessible on SMPs. This demonstrates the impact that a platform has on user perceptions, adoption and behavior as reinforced by Violet: *I don't post statuses on Facebook. That's basically because I've got nothing really to post. If I do like take a selfie or photo, I post it on Instagram but I wouldn't post it on Facebook just because it's weird.*

As opposed to Facebook, Instagram provided the participants with the ideal environment for deep individual expression, exemplifying the uniqueness of each platform environment. Instagram's distinct norms and characteristics encouraged the participants to have multiple accounts (between two and three) with varying degrees of privacy, publicity, and accessibility. Instagram users exposed a unique side of themselves on their smaller, personal accounts as it represented a self-constrained social environment where they were open to experiment with their sense of self. This is reinforced by Michelle who stated: *[I] post random things [on my personal account] like 'I'm awake at 3am, anyone else?' Anything like that. So, it is just kind of a casual thing... I often go through [my followers] and remove people I don't really talk to as much, just to keep it close.*



**Figure 1: Instagram social circles**

As shown in Figure 1, the participants possessed publicly facing Instagram accounts, generally with larger followings, which showed a more reserved and polished version of the self. Smaller private accounts were significantly different, including more ‘selfies’, videos of the individual talking about their emotions, and friends actively providing advice and support to the individual as clarified by Marya’s description of her friend’s profile: *Their main [Instagram account] might have a photo of the beach, the second account would be a photo of what they’re wearing, and the third one might have a hideous photo that others shouldn’t see.*

### Peer Exclusion

The few that engaged with SMPs to a lesser degree also revealed how the lack of engagement negatively impacted their lives. Significant peer pressure to adopt and use SMPs was felt amongst these participants as explained by Grace: *I’m more honest in person whereas it’s like I don’t even exist on Facebook. I feel like an outlier. The thing is, I feel like others who are more in tune with social media, if you tell them that you’re not interested in social media at all they take it as a negative thing.*

This sub-group also had a strong preference towards maintaining an older group of friends. As identified in the literature, lower levels of SMP engagement are correlated with a more mature group of friends with a focus on authentic relationships (Livingstone 2008) as clarified with Rachel: *When you are friends with someone on Facebook it’s not a real relationship like friendship or family, not real bonds. You can be friends with someone on Facebook and they can be an acquaintance, but you’ve got your close friends and family, and that’s mainly what I use social media for, to stay in contact with those people.*

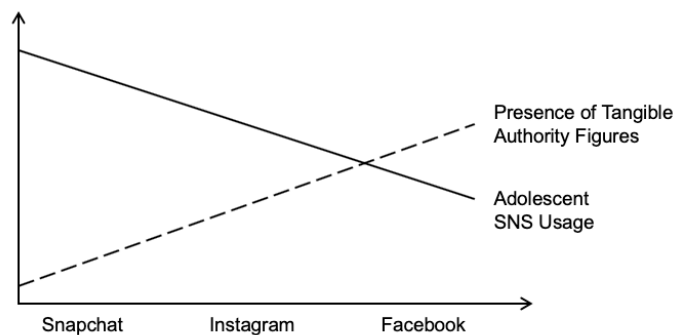
### Perceived Visibility

#### Family

Family played a key role in SMP engagement. At one stage, most participants actively posted, shared, and commented on Facebook whereas few actively engage with the platform now. Most of the participants either subtly or openly discussed the impact of family on their usage of SMPs, with 21 out of 22 participants connected to family members on Facebook whereas only four and five participants had family members as connections on Instagram and Snapchat, respectively. Lily, in particular, discussed Facebook and its impact on her engagement with the platform: *I broke up with my boyfriend, but my post is on Facebook and my mom only has a few friends. So my posts are always on her home page and she’s like, oh why is the photo still there you should take it off because I think her friends who saw my post talk to her about it and she doesn’t want others to discuss it with her.*

#### Other Authority Figures

The participants also appeared to dislike other adults and organizations trying to engage with them through SMPs such as Instagram. Amanda stated that: *I loathe the idea of social media becoming so appropriated by adults. For example, so many different organizations are now using hashtags assuming it will get our attention... I feel as though adults just slap on a hashtag to something and think it immediately becomes relatable.*



**Figure 2: Impact of authority figures on SMP usage**

Statements such as these indicate that the adoption of Facebook by an increasingly older populous has amplified the visibility of tangible authority figures. Tangible authority figures disrupt the individual's ability to conduct the developmental tasks inherently associated with adolescence. As shown in Figure 2, the presence of tangible authority figures on Snapchat and Instagram are less than that of Facebook. Because of this, the group sought out different SMPs, such as Instagram and Snapchat, which allow them to partake in activities without the interference of authority figures.

Specific traits such as these partially explain this group's preference towards Instagram and Snapchat. For example, on these platforms, the participants shared both superficial and in-depth information online. As stated by Michelle, exposing one's most vulnerable version of self was easier to express on Instagram. Snapchat also created a similar social environment where perceptions of privacy encouraged the disclosure of high-risk activities, as explained by Tanya: *Snapchat is all about parties, I've seen people smoke weed on it... So many nude photos get spread around. That's even worse.*

The exceptional prevalence of family on Facebook, however, resulted in the participants sharing little to no personal content on the platform. In this context, the differences between Instagram and Facebook were substantial. The participants were more likely to disclose in-depth information about their feelings and thoughts on private Instagram accounts than their public accounts. Thus, the strong presence of tangible authority figures on Facebook in combination with the nuanced privacy perceptions associated with Instagram and Snapchat suggests that engagement by this group varies significantly based on the platform being used.

## Risk

### Risk Normalization

This group also adjusted their perceptions of risk based on their environment. Some participants that were facing some type of harassment appeared to have normalized the events. For example, when asked about a variety of harassment-related risks online, common responses included: *If they request me with no mutual [friends], I will always block them. Family friends as well that are creepy, but nothing major. Normally I just go to my cousin or sister and ask if they know him or if he's okay (Michelle) and I get heaps of random messages; they're like 'Oh, you're pretty' and that's when I block them (Vanessa).*

Due to the normalization of these types of situations, participants were able to manage themselves effectively in some scenarios. Two participants further commented on the normalization of potentially inappropriate content: *I think that [my age group] use [social media] appropriately for how they think that they should use it. So, they go to parties and they'll post photos of them drunk and they think that that's okay but then when you think about it, do you really want people to see that? (Marya) and Slowly there becomes these etiquettes for social media. Like on Facebook, people posting half naked photos is really weird. While on Instagram it's the norm. It's even respected, body art for example (Suzy).*

The normalization of risk in combination with an adolescent's predisposition to engage with risk impacted the participant's perceptions. The participants were able to understand and evaluate how norms influenced both their own and their peer's behavior. Notably, Suzy reiterated the critical difference between SMPs as posting provocative photographs is appropriate on Instagram but inappropriate on Facebook. This further clarifies the difference between platforms and demonstrates that entirely different cultures can emerge based on the platform and groups involved.

### Risk Exposure

While the participants managed themselves appropriately in low-risk situations, some of them had exposed themselves to significant online risks as well. Emma, for example, stated that: *One friend I talk to weekly and have known for three years is someone I just met online. My plan is to go meet her this year. When asked if she was concerned about meeting her friend in person, she responded: [I am], because you talk all the time and then you see them and you freak out, like, 'Oh my god, I'm actually doing this.*

Through further conversation, Emma appeared to be unconcerned about her safety when meeting an online friend in person for the first time. She stated that she would meet her friend in public, so safety was not a concern. Another participant, Melody, spoke about her close friend's experience with a fake account

holder on Facebook: *[The account was so obviously] fake that I'm ashamed that people [thought it was] real... [My friend's] going through a tough time but it's okay. She is upset about it. He has naked photos of her and is like threatening her and stuff. She's forced to go on video chat and do really weird sexual stuff.*"

Although the participant's found fake accounts easy to identify and normal as part of using SMPs, Melody's friend exchanged numerous messages and photographs with the account holder for several weeks. Melody also stated that this type of scenario occurred frequently within her friend group. This demonstrates a potential gap between risk awareness and risk-taking.

### Risk Awareness

This group appeared to be highly knowledgeable about the risks of using SMPs, yet ignored these risks frequently. This may be linked to the developmental period that is adolescence. Adolescents are expected to actively seek out opportunities that adult observers may otherwise find risky (Soto et al. 2011). Amanda, for example, explained that she understood the risks of using SMPs without utilizing the privacy-protective mechanisms but thought that those risks did not apply to her: *If someone found out something about me because of my privacy settings, I would feel like "woah what did they actually get me into?"... At the moment it feels like someone could hack your account but they are anonymous, distant and removed.*

In combination with the fact that this group was frequently exposed to environments mediated by SMPs, continuous exposure may gradually change their behavior, subsequently resulting in a lack of interest in privacy. This was reiterated by Sarah: *We are the generation of technology. When I was a little kid, I think Myspace was around. So, for us, it has been there constantly, and we've had constant signs which say 'We won't share your private info.' So, we have these expectations of what they will do for us.*

### Conclusion

This study examined how a particular VG, adolescent females, engaged with Facebook, Instagram, and Snapchat. Qualitative analysis of 22 semi-structured interviews revealed that the platform, tangible authority figures, risk normalization and risk awareness collectively influenced how this group behaved on SMPs. The participants focused on who had access to their information more so than the various privacy protective mechanisms available on the platforms. This encouraged more frequent and in-depth engagement with Instagram and Snapchat as they felt that they were able to participate more freely and experience the positive social benefits associated with active participation.

The participant's perceptions of each SMP were unique and varied. With a low presence of adults and a high presence of their own peers, newer platforms such as Instagram and Snapchat were engaged with more frequently, and more in-depth, than Facebook. SMP engagement, therefore, may be related to the maturity of the platform as well as the platform itself, at least in the context of this group. The participants also preferred to adopt platforms where greater levels of disclosure were normalized. Instagram, for example, with its ability to switch between multiple public and private accounts, allowed users to present different sides of themselves to different audiences. Individual SMPs therefore cultivate unique cultures and practices, a process that may be accelerated in the context of adolescent females.

This paper creates multiple avenues for future research, particularly around VGs. For example, does this group prefer Instagram and Snapchat primarily because there's less of an adult presence? Do platform features play a significant role in engagement and adoption in the context of this group? In addition, what other VGs exist where further research is required? This work, however, should also be viewed considering its intrinsic limitations. As a qualitative study, further confirmatory research is required to understand this group, as well as other VGs, in the context of SMPs. In addition, only the three most popular SMPs for this age group were selected for this study. Future studies can investigate other popular SMPs.



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