Exploring the Role of Parents and Peers in Young Adolescents' Risk Taking in Social Networking Sites

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Abstract

This study investigated the role of parental and peer mediation in young adolescents' engagement in risk-taking in social networking sites (SNSs). A survey conducted in Malaysia with 469 SNS users aged 13-14 revealed that control-based parental mediation can cause boomerang effects, making young adolescents more inclined to taking risks in SNSs. While discussion-based parental mediation was found to be negatively related to young adolescents' befriending strangers in SNSs, it did not reduce privacy risks. Findings also suggested that peer influence could result in undesirable outcomes. In particular, the more young adolescents talked about Internet-related issues with peers, the more likely they were to disclose personally identifiable information on SNSs.

Introduction

Adolescents are actively engaged in social networking. In the USA, 95% of teens aged 12-17 use the Internet, and 88% of them are social media users.[1] *EU Kids Online* reported that more than 77% of Internet users aged 13-16 in Europe have a profile on a social networking site (SNS), and one third have more than 100 contacts on their SNS profiles.[2] Similar trends have also been witnessed in many other countries.[3-7]

Prevalence of youth social networking has raised a range of concerns.[8] Pew Internet[1] reported that one third of teen Facebook users make friends with people they have never met in person. The same survey also revealed that one in six online teens have been contacted by strangers in a way they felt uncomfortable. A global survey conducted with children aged 8-17 in 24 countries informed that 62% of online children have experienced negative online situations, with the top negative online experience being "encountering someone trying to befriend on SNSs."[9]

As risks associated with youth social networking have been highlighted, the role of parents in educating children about pros and cons of social media has also been emphasized.[2,9] However, given that children spend substantial time outside home and actively network with peers online, the role of external socializations like peers should also be considered. Since children's social learning is a multi-faceted process involving multiple socialization agents,[10] it is important to explore roles played by various types of socialization agents, rather than focus on a single type of socialization agent.

This study aims to investigate how two different types of socialization agents—parents and peers—affect young adolescents' involvement in risky SNS behaviors. The present study examines youths in Malaysia for three reasons. First, they are active SNS users spending an

average of 19 hours online per week, and 20% of Facebook users of the country are younger than 18.[7,11] Second, they are exposed to various online risks. A survey conducted with Internet users aged 10-17 in Malaysia[7] found that 87% of them have been exposed to negative experiences, and seven in ten have met strangers who tried to add them as a friend on SNS. As such risks are also growing concerns in many other countries,[2,6] findings from this study should provide useful insights applicable to different research contexts. Third, despite high Internet broadband and mobile penetration rates in Malaysia,[12] little is known regarding youth Internet use in the country. Since most insights gained in this area of research have been based on studies conducted in more economically developed, Western countries, the current study is expected to add meaningful knowledge to the literature.

This study focuses on early adolescents (aged 13-14) because research suggests that younger teens are more likely than older teens to engage in risky behaviors. According to Comstock,[13] adolescents mature through three phases—early (13-14), middle (15-17), and late adolescence (18+). Early adolescence is characterized by the onset of puberty and pursuit of autonomy. Their desire to be autonomous often leads them to reject parental authority and take risks.[14] However, as compared to older counterparts, early adolescents are less experienced and less critical about media practices.[14] With less online experience and lower levels of skepticism, early adolescents are more likely than older counterparts to be vulnerable to negative online influences.[14]

Parental vs. peer influence on children's media use

Parents utilize various strategies to monitor and supervise their children's media use, and such strategies can "mediate" the way children are affected by media.[15] Such strategies are termed "parental mediation."[16] Parental mediation theory is rooted in media effects and

information processing theories as well as interpersonal communication theories, as it examines how interpersonal interactions between parents and children mitigate negative media influences on children.[17]

There are three identified common strategies of parental mediation: Restrictive mediation (controlling children's usage of and exposure to media), active mediation (taking to children about media and helping children properly consume media content), and co-use (using media together without purposeful discussions).[17] This study examines restrictive and active mediation for two reasons. First, as compared to restrictive mediation and active mediation, the impact of co-use has not been compellingly verified.[18,19] Second, while co-use often refers to the situation when parents and kids watch television together, this is not likely to happen on the Internet as the Internet is a solitary medium mostly used by individuals via personal/mobile devices.[19]

Research suggests that restrictive mediation can be effective in reducing negative media influences on children because it can decrease a child's chances to be exposed to less desirable media content.[15,20,21] However, previous studies have also demonstrated that too much restriction can backfire, especially when it is imposed on adolescents.[22-24] Excessive restriction can also make adolescents more interested in the restricted media content, causing "forbidden fruit effects".[24] Such unintended consequences of restrictive mediation can be more prevalent among early adolescents with growing desire to challenge parental authority.[13]

Research suggests that active mediation is associated with positive media socialization outcomes in both traditional [25,26] and new media contexts[23,27] across different age groups.[6] Adolescents tend to be less resistant to active mediation than restrictive mediation because parent-adolescent mutual discussions and conversations tend to lead adolescents to be more responsive to parental comments and better internalize parental expectations.[23,28] Scholars have

argued that active mediation based on conversation and critical discussion is more likely to cultivate critical thinking skills in youths than restrictive mediation.[29]

Overall, literature suggests that different types of parental mediation can entail different outcomes. Active mediation would work better than restrictive mediation for adolescents since the former can cultivate critical thinking skills whereas the latter can cause resistance. Hence:

H1. Adolescents receiving higher levels of restrictive mediation from their parents are more likely to be engaged in risky SNS behaviors than those receiving lower levels of restrictive mediation.

H2. Adolescents receiving higher levels of active mediation from their parents are less likely to be engaged in risky SNS behaviors than those receiving lower level of active mediation.

Also, as children grow older and spend more time with peers, the role of parents as socialization agents tends to diminish while peer influence tends to increase.[30] This is especially true for adolescents who spend more time with peers and less time with parents.[24,31] However, due to lack of research, knowledge of peer influence on adolescents' media-related attitudes and behaviors is limited. Nathanson[18] (2001) argued that peer mediation (i.e., peers talking to children about media) would work differently from parental mediation because "peers are not charged with the duty of socializing one another into proper moral conduct" (p.257). Thus, compared to parental mediation, peer mediation is less likely to involve critical assessment of media issue, and consequently, less likely to entail "pro-social" outcomes.[18] Nathanson[18] empirically demonstrated that teenagers who frequently talked to their friends about antisocial television content had more favorable attitudes toward antisocial television programs. Similar

findings have been reported in non-media contexts, such as teens' impulsive buying,[32] materialism,[33-35] and smoking.[36]

Overall, the literature suggests that outcomes of peer influence are likely to be different from those of parental mediation. Peer discussion among teenagers is less likely to stress conformity to social norms as compared to parental discussion. On the other hand, parental interventions are more likely to promote behaviors that fit the social norms.[37] Thus:

H3. Adolescents receiving higher levels of peer mediation are more likely to be engaged in risky SNS behaviors than those receiving lower levels of peer mediation.

Method

Participants and procedure

496 first- and second-year students from two public secondary schools (equivalent to 7th and 8th graders in the US education system) in Kuala Lumpur, Malaysia, were invited to a paper-and-pencil survey. Prior to the scheduled survey date, a parent consent form was delivered to parents using a passive informed consent procedure to minimize sampling biases (e.g., over-representing of well-functioning families).[38,39] No parent expressed disagreement with their children's participating in the survey before or after the survey was conducted.

On the scheduled survey date, students at each school filled out a questionnaire in their school hall. One of the authors was available to give students a consent form and answer questions from the students. Respondent privacy was ensured as responses were anonymous. Three dropped out halfway through the survey sessions because they had to attend other events. Among those who completed the questionnaire (*N*=493), 469 (95.1%) reported to have their own profiles on SNSs. Since the current study examines risks associated with SNSs, data collected from SNS users were used for this study. SNS users from the two schools were compared on the

variables of main interest (parental/peer mediation and SNS risks (Table 1). Since no significant difference was found, data from the two schools were combined into one dataset.

[Table 1]

Measures

Parental mediation. Measurement items for parental mediation were derived from prior research on parental mediation of teenagers' Internet use.[2,20,21,27] Restrictive mediation was measured by asking participants to rate how often their parent/caregiver who spent the most time with them at home controlled/restricted their Internet use (e.g., "Determine which website I can/can't visit"), using nine 5-point scales (1="never"; 5="always"). For active mediation, participants were asked whether their parent/caregiver who spent the most time with them at home had helped on or talked about proper ways of using the Internet (e.g., "Explain why some websites are good/bad"). Six items were rated using a "yes" (1) or "no" (0) dichotomous format.

Peer mediation. Peer mediation was measured by the same six items for parental active mediation. Participants were asked to indicate whether their close friends had practiced each of the six types of active mediation. Following Nathanson,[18] restrictive mediation imposed by peers was not assessed because peers are less likely to check or set specific rules about adolescents' Internet activities.

Risky SNS behaviors. Following the literature of adolescents' risky online experiences,[20,21,40,41] this study assessed two types of risks—contact risk and privacy risk. For both types of risks, participants were asked to think about a social networking site that they used most often. Contact risk was measured by asking whether they had added people whom they had never met face-to-face to their friend lists on SNS (1="Yes"; 0="No"). To assess privacy risk, participants were first asked to choose bits of personal information that their SNS profiles

included. Sixteen types of personally identifiable information (PII) derived from the Children's

Online Privacy Protection Act (COPPA) guidelines[42] were listed (e.g., real name, home address,

email address, phone number), and participants were asked to choose all that applied. Next,

participants were asked to report the privacy setting of their SNSs: "private so that only my

friends can see it" (1), "partially private so that friends of friends or my networks can see it" (2),

and "public so that everyone can see it" (3). The final privacy risk score was constructed by

multiplying the number of PII included in one's SNS (0-16) and its privacy setting (1-3).

Demographic information (age and gender), perceived Internet skills, and social activities

in SNS were also collected. Perceived Internet skills were measured by five 5-point scales

(1="strongly disagree"; 5="strongly agree") adopted from Cho and Cheon.[43] Social activities in

SNS were measured by asking respondents how often they were engaged in four types of SNS

activities on a 5-point scale (1="never or almost never"; 5="every day or almost every day").

Table 2 displays descriptive statistics of the measurements.

[Table 2]

Results

Sample characteristics

The final SNS user sample ($N = 469$) consisted of 45.4% boys and 54.6% girls, and 52.6%

of age 13 and 47.4% of age 14 ($M =13.5$, $SD =.50$). More than 60% visited social networking

sites at least once a day. Their SNS profiles included an average number of 6.56 PII items (SD

$=2.63$). Three in ten (28.1%) set their social networking sites as private, 25.6% as partially

private, 36.9% as public, and 9.4% being unsure about it. About one quarter (24.1%) reported

they had added people that they have never met face-to-face to their SNS friend lists.

Hypothesis testing

To test the hypotheses, two hierarchical regression analyses were conducted with contact risk and privacy risk as the dependent variables (DVs), while controlling for gender, perceived Internet skills, and SNS activities. Because contact risk was non-numeric data, a hierarchical logistic regression was performed (Table 3). For privacy risk, the data being numeric, a hierarchical linear regression was conducted (Table 4). For each analysis, control variables were entered into the first block and the main effect variables (IVs) were entered into the second block using an enter method. Collinearity statistics (tolerance and variance inflation factors) were obtained to detect multicollinearity in the dataset. No issue of multicollinearity arose.

[Table 3 & Table 4]

The model fit improvement (Table 3) and the significant R^2 increment (Table 4) from step 1 to step 2 in each regression model indicated that the main effect variables explained a substantial proportion of the total variance in each DV. The results showed that parental restrictive mediation is positively and significantly associated with both types of risk-taking behaviors in SNS, supporting H1. That is, the more adolescents received parental restrictive mediation, the more likely they were to add strangers to their SNS friend lists and disclose PII on their SNSs. For H2, parental active mediation emerged as a negative predictor of contact risk, suggesting adolescents receiving more parental active mediation are less likely to add strangers to their SNS friend lists than those receiving less parental active mediation. However, parental active mediation was found to be positively associated with privacy risk, although the association was rather weak ($\beta = .13$, $p < .05$). Thus, H2 was supported for contact risk only. Finally, peer active mediation emerged as a positive predictor of privacy risk, indicating that adolescents who often discussed with their friends about Internet-related issues were more likely to disclose PII

on their SNSs. Yet, peer mediation was not found to be significantly associated with contact risk. Thus, H3 was supported for privacy risk only.

Discussion

This study revealed that adolescents who received higher levels of parental restrictive mediation were more inclined to engage in risk-taking behaviors in SNSs. This reaffirms the findings of earlier studies in different research contexts,[23,24] highlighting a major pitfall of restrictive mediation. While restrictive mediation may be favored by parents as it is straightforward and easy to implement,[44] excessive restriction can also result in unintended consequences, especially when imposed on adolescents with increasing pursuits of autonomy.[22-24] Our study, together with previous studies, strongly suggests that parents should understand unique characteristics of different developmental stages of children and implement proper mediation strategies for different age groups.

Our findings suggest parental active mediation can be effective in reducing contact risks, but not privacy risks. That is, not even active mediation is capable of totally eliminating the risks associated with young adolescents' use of SNSs. This may possibly be caused by the difficulty parents face to stay on par with their teens in term of knowledge and skills of new technologies. Shin[44] argued that, in order for active mediation to be effective, it is necessary for parents to keep themselves updated with new media knowledge and to continuously engage in dialogues with their children. However, as digital immigrants, not digital natives like youths today, it can be challenging for parents to fully comprehend SNS-associated risks. Without in-depth understanding of how SNSs work and what specific risks exist, it will be difficult for parents to effectively communicate with their teenagers about pros and cons of privacy disclosure on SNSs. Under such circumstances, even discussion-based active mediation may cause undesirable

effects because arguments made by parents may sound less convincing to the tech-savvy teens. This may lead adolescents to be more resistant to parental instructions. We encourage future research to test the validity of this postulation by examining the impact of parents' SNS knowledge on parental mediation effectiveness.

We found a positive association between peer mediation and privacy risk. This finding is consistent with what previous studies have found in traditional media and non-communication contexts in that peer interactions may result in socially-undesirable outcomes.[18,32-35] Considering that the role of peers as external socialization agents is becoming more crucial as adolescents grow older,[13,45] more research is required to examine peer influence on adolescents' risk-taking in various communication contexts.

This study provides meaningful insights by exploring understudied areas (parent vs. peer influence on children's online media use), examining increasingly important issues (risks involved in SNSs), in an underexplored but important research context (non-Western, less economically developed country), making important contributions to the research literature. However, it has limitations. First, this study focused on a narrow age range—early adolescence. As children grow older, peer influence on teenagers' media behaviors becomes more crucial.[18] Interestingly, adolescents tend to become less resistant to parental authority as their ability to integrate parents' view grows with age.[13] Future research should examine the changing roles of parents and peers in adolescents' media socialization in different phases of adolescence (early, middle, and late). Second, this cross-sectional study was conducted in a single country. Caution needs to be exercised when applying findings from this study to other research contexts. Third, the data reflected adolescents' point of view only, without accounting for socialization agent standpoints. Research suggests that parents and children may view the same things

differently[29,43] and that discrepancies between parents and children in reporting parental

mediation may hamper parental mediation effects.[46] Further research should investigate how

socialization agents view their influences on youths and whether youth-agent perspective

differences affect media socialization outcomes.

Disclosure statement

No competing financial interests exist.

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Table 1. Comparisons between Two Participating Schools on Key Variables

Variables	Scale	School 1 (n =323)	School 2 (n =146)	t	χ^2	p (2-tailed)
Parental restrictive mediation	1-5	2.75 (0.81)	2.74 (0.79)	0.54	-	0.96
Parental active mediation	1-6	3.07 (2.36)	2.97 (2.32)	0.42	-	0.67
Peer active mediation	1-6	1.46 (1.63)	1.43 (1.58)	0.15	-	0.88
Contact risk	0(No) / 1(Yes)	23.2%	26.0%	-	0.43	0.51
Privacy risk	0-48	13.85 (8.71)	14.47 (9.32)	-0.66	-	0.51

Note: Values under *School 1* and *School 2* are either means (and standard deviations in the parentheses) or column percentages (for "Yes"). Independent samples *t*-tests were conducted for the metric scales (parental/peer mediation and privacy risk) and a Chi-square (χ^2) test for the nominal scale (contact risk).

Table 2. Descriptive Statistics for Scales

Variables	Range	Mean (SD)	Cronbach's α
Parental restrictive mediation (9 items)	1-5	2.74 (0.80)	0.88
Parental active mediation (6 items)	1-6	3.04 (2.35)	0.88
Peer active mediation (6 items)	1-6	1.45 (1.61)	0.70
Contact risk	0(No)/1(Yes)	0.24 (0.43)	-
Privacy risk	0-48	14.04 (8.90)	-
Perceived Internet skills (5 items)	1-5	4.01 (0.58)	0.72
Posting status update on SNS	1-5	2.96 (1.32)	-
Posting comments on friends' SNS	1-5	3.34 (1.36)	-
Chatting with someone through SNS	1-5	3.42 (1.48)	-
Playing a game on SNS	1-5	2.75 (1.31)	-

Table 3. Hierarchical Logistic Regression Predicting Contact Risk in Social Networking Sites

Variables	B	SE(B)	Odds Ratio	p (2-tailed)
Step 1: Control variables				
Gender (1= boys)	.29	.38	1.34	.44
Perceived Internet skills	.91	.36	2.48	<.05
Posting status update on SNS	.03	.21	1.03	.89
Posting comments on friend's SNS	.56	.21	1.75	<.01
Chatting with someone through SNS	.12	.17	1.13	.47
Playing a game on SNS	.48	.16	1.61	<.01

Model $\chi^2(6)$ =126.56 (p < .001)
-2LL=254.77, Nagelkerke = .45

Step 2: Socialization agent influence				
Parental restrictive mediation	1.52	.30	4.56	<.001
Parental active mediation	-.32	.09	.73	<.001
Peer active mediation	-.11	.13	.89	.38

Model $\chi^2(9)$=179.48 (p < .001)
$\Delta\chi^2$= 52.92 (p <. 001)
-2LL=201.85, Nagelkerke = .60

Note: B, SE(B), and Odds Ratio are from the final regression equation with all blocks of variables in the model.

Table 4. Hierarchical Linear Regression Predicting Privacy Risk in Social Networking Sites

Variables	B	SE(B)	β	p (2-tailed)
Step 1: Control variables				
Gender (Boys = 1, girls = 0)	1.55	.90	.09	.09
Perceived Internet skills	1.22	.93	.07	.19
Posting status update on SNS	-1.53	.45	-.23	<.01
Posting comments on friend's SNS	1.15	.46	.17	<.05
Chatting with someone through SNS	1.20	.37	.20	<.01
Playing a game on SNS	.66	.36	.10	.07

$$R = .103, \; Adj\; R^2 = .09$$
$$F(6, 324) = 6.21, \; p < .001$$

Variables	B	SE(B)	β	p (2-tailed)
Step 2: Socialization agent influence				
Parental restrictive mediation	3.54	.60	.31	<.001
Parental active mediation	.48	.21	.13	<.05
Peer active mediation	.86	.32	.15	<.01

$$= .217 \; (\Delta = .114, \; p < .001), \; Adj = .20$$
$$F(9, 321) = 9.87, \; p < .001$$

Note: *B, SE(B), β*, and *p* are from the final regression equation with all blocks of variables in the model.