

3rd icH&Hpsy 2017
3rd International Conference on Health and Health Psychology

**ADOLESCENTS' PERCEPTION OF RISKY BEHAVIOUR ON THE
INTERNET**

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Abstract

As the usage of the Internet is growing among young people, their engagement in risky behaviours online is also increasing. However, adolescents' may not perceive these behaviours as risky. Thus, the research questions of this study are: (1) how do adolescents perceive different forms of risky behaviour on the Internet? (2) Are there any demographical differences in adolescents' perception of risky behaviour on the Internet? The purpose of this study is to find out if there are any differences in adolescents' perception of risky behaviour on the Internet, regarding their age, gender, and engagement in online risky behaviour. Research method used was a cross-sectional survey with a questionnaire, based on a variety of the forms of risky behaviours on the Internet (e.g. sexting; sharing personal photos). Adolescents' perceptions of risky behaviours online were measured on the scale from 1 (not risky at all) to 10 (very risky). 152 Lithuanian adolescents (63 boys and 89 girls) aged 12 to 18 participated in the study. The results showed that students perceive various forms of behaviour on the Internet as risky. Their risk perception differs according to their gender (girls perceive behaviours as riskier than boys), age (younger adolescents perceive behaviours as riskier than older ones), and engagement in risky behaviours online (those who engage less rate behaviour as riskier). Thus, older male students and students who engage in risky behaviour online more often are less likely to recognize and perceive behaviours on the Internet as risky. More attention should be paid in educating adolescents about risky online behaviours.

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Keywords: Risky online behaviour, adolescents, gender.



1. Introduction

The usage of the Internet in the today's society is growing. According to the Internet World Stats (2017), there are around 4 billion (46.9% of population) Internet users around the World, with a majority of them in Asia (50.2% of users) and Europe (17.1% of users). This indicates that the growing usage of the Internet has become a very important subject of research in different scientific areas (e.g., *psychology, business, education, and media*) and also explains the expanded researchers' interest on the growing Internet users' behaviour. The increase of the research in the field of risky online behaviour might be explained not only by the increasing usage but also by the challenges users encounter.

It is postulated that both adolescents and adults are likely to engage in different activities online (Livingstone, Smith, 2014) as it expands their ability to look for the needed information or create and maintain personal relationships (Bronstein, 2014; Noll, Chad, Barnes, 2013). In other words, we can do a lot of daily things using the Internet, what ten years ago seemed impossible. However, such kind of usage is commonly related to negative consequences and generally is called as risky behaviour online (Lau, Yuen, 2013). Risky behaviour on the Internet may be defined as a particular behaviour on the Internet, which may be potentially harmful for its user (Gamez-Guadix et al., 2016). The main forms of risky behaviour on the Internet are: content (e.g. using sexual information), interactions or contact (e.g. communicating with strangers), commercial (e.g. gambling) (Livingstone et al., 2011; Livingstone, Smith, 2014). Basically, the main risks online are: communication with unknown people and cyberbullying (Gamez-Guadix et al., 2016).

Researchers state that adolescence is the period of identity experimentation which is related to adolescents' sensation seeking (Notten, Nikken, 2014) and low self-regulation (Reyna et al., 2015). Thus, it is also argued that these developmental aspects are related to adolescents' tendency to engage in risky online behaviours (Livingstone, Smith, 2014). As adolescents may lack of ability to perceive risky online behaviours as risky, it is meaningful to analyse adolescents' perception of risky online behaviours.

2. Problem Statement

As mentioned, adolescence is a period of taking risks (Reyna et al., 2015). Thus, as adolescents are likely to engage in risky behaviours offline, they are also likely to engage in risky behaviours on the Internet (Tokunaga, 2010; Valkenburg, Peter, 2011). It is difficult to distinguish prevalence of particular risky online behaviours in adolescence because different scholars show different results. For example, prevalence of cyberbullying varies from 6 to 72 percent (Tokunaga, 2010). Despite this, adolescents' engagement in risky behaviours is related to the biopsychosocial changes during puberty; the need to experiment with their own identity (Gamez-Guadix et al., 2016); the ability to properly understand and to evaluate their behaviour on the Internet as a potentially harmful or to control it (Mubarak, Mani, 2015).

Cognitive development is an important factor in analysing adolescents' tendency to engage in risky behaviours (Baumgartner, Valkenburg, Peter, 2010; Noll, Chad, Barnes, 2013; Reyna et al., 2015) because their interpretations of behavioural options differ from adults (Reyna et al., 2015). For example, according to fuzzy-trace theory, adolescents may be likely to engage in risky behaviours because of active risk-reward systems (Galvan et al., 2007; Reyna et al., 2015; Steinberg, 2008; Steinberg, Chein, 2015),

which supplement adolescent' need to make risky decisions in order to be rewarded. It seems that decision to engage in risky behaviour or not, mainly depends on adolescents' ability to appropriately evaluate it as risky (Mitchell, Schoel, Stevens, 2008). It is said that during middle adolescence teenagers are more likely to seek for sensation because of low self-regulation skills and this trajectory is called as dual system model (Steinberg, 2008). According to this model, it is possible to postulate that adolescents' risk-taking behaviour is mostly related to and depended on their cognitive functioning and reward sensitivity systems (Duell et al., 2016; Shulmana et al., 2016) in online settings also.

It is also important to mention the influence of peers on adolescents' risky online behaviour. As adolescents start questioning adults (especially parents) authority and tend to go ahead with the opinion of peers (Knoll et al., 2015) in order to belong to their group or to gain personal attention. For example, Baumgartner, Valkenburg and Peter (2011) have stated that adolescents may be likely to engage in risky sexual online behaviour because they perceive their peers are doing so also.

Moreover, there are some age and gender differences in adolescents' engagement in risky behaviours online. Mostly researchers agree that older male adolescents are more likely to engage in risky behaviours on the Internet (Baumgartner et al. 2010; Livingstone et al. 2011; Notten, Nikken, 2014). Researchers (e.g., Livingstone, Kalmus, Talves, 2013) note that boys are more likely play online games, visit pornographic or erotic sites while girls are more likely to spend their time on social networking. Age differences of engagement in risky behaviours online are generally explained by adolescents' developmental factors (e.g. adolescents are higher in sensation seeking than adults) (Giedd, 2012) and by the fact that today's adolescents are more skilled in using the Internet than adults (Shin, 2016). However, other researchers' state that there are minor or no gender/age (e.g. see Tokunaga's (2010) review on cyberbullying) differences in adolescents engagement in risky behaviours online.

Thus, according to the wide range of literature on risky adolescents' online behaviour and their possible low abilities to evaluate risky behaviour as risky, it would be meaningful to analyse how adolescents perceive risky behaviours on the Internet and how it depends on their age, gender and engagement in risky online behaviours.

3. Research Questions

- 3.1 How do adolescents perceive different forms of risky behaviour on the Internet?
- 3.2 Are there any demographical differences in adolescents' perception of risky behaviour on the Internet?

4. Purpose of the Study

The purpose of this study is to find out if there are any differences in adolescents' perception of risky behaviour on the Internet, regarding their age, gender, and engagement in online risky behaviour.

5. Research Methods

5.1. Participants

One hundred fifty two 6th-11th grade students from Lithuanian secondary schools' participated in this study. Eighty nine of them were female (59%) and sixty three male (41%). Their age ranged from 12 to 18 years, with a mean of 14.8 years (SD=1.72).

The sample for this study was taken from Lithuanian secondary schools' (or so called gymnasiums) and it was homogenous in terms of ethnic background.

5.2. Measures

Students' perception of risky online behaviour was measured using a propositions suggested in Ybarra and colleagues (2007) and Notten & Nikken (2014) studies. The created scale included 11 items (e.g. sexting, sharing personal photos). Students' had to rate each proposition on the scale from 1 (not risky at all) to 10 (very risky). Cronbach's alpha for this scale was 0.63.

Students' engagement in risky behaviours online was measured using the same 11 propositions mentioned above. The participants were asked to rate how often they engage in each of a given behaviours on the scale from 1 (never) to 6 (very often). Cronbach's alpha for this scale was 0.62.

Students also had to indicate their gender and age.

The study was organised in Lithuanian secondary schools after getting the consents from students' parents and schools' administration. One hundred and seventy five consents have been given to students' parents and 154 of them signed the consents. Two of the questionnaires weren't included in the study because they were wrongly filled in.

6. Findings

In this section we present the results of adolescents' perceptions of risky online behaviour and its predictions. The presentation includes adolescents' engagement and perception of risky behaviour online and its prediction by sociodemographic characteristics.

6.1. Adolescents' engagement in risky online behaviour

First of all, in order to find out the particular forms of risky online behaviour that adolescents tend to engage in, the means of each form of risky behaviour online have been evaluated.

Table 01. The means of particular forms of students' engagement in risky online behaviour (N=152).

Risky Online Behaviour	Mean	Std Dev.
Visiting pornographic sites	1.38	1.02
Talking about sexual things	1.46	.99
Accepting strangers to friends' list	1.99	1.11
Post rude, offensive comments	1.55	1.02
Pretend to be someone else	1.38	.74
Posting photos of age forbidden behaviour	1.24	.74

Posting personal photos	3.03	1.59
Set a real age or birth date	3.63	1.53
Set a real school name	2.86	1.63
Set personal phone number	2.05	1.29
Set your real name or surname	3.87	1.66

As it can be seen in Table 1, adolescents are likely to engage in every possibly risky behaviour online. Mostly students are likely to share their *real name or surname*, set their *real age or birth date*, *post personal photos*, *set a real school name*, *set personal phone number*.

6.2. Adolescents' perception of risky online behaviour

In order to find out if there is any difference in the particular forms of risky online behaviour that adolescents tend to perceive as risky, parametric One-Sample t test was used (Table 2). Value of 3 has been chosen as a test value as it means that adolescents have rated the particular risky online behaviour as risky.

Table 02. The means of particular forms of students' perception of risky online behaviour (N=152).

Risky Online Behaviour	Mean	Std Dev.	Mean Difference	t
Visiting pornographic sites	7.80*	2.94	4.8	20.13
Talking about sexual things	7.17*	3.11	4.17	16.47
Accepting strangers to friends' list	6.21*	2.78	3.21	14.22
Post rude, offensive comments	7.10*	2.72	4.1	18.61
Pretend to be someone else	5.89*	3.18	2.9	11.24
Posting photos of age forbidden behaviour	7.91*	2.58	4.91	23.48
Posting personal photos	6.09*	2.55	3.09	14.93
Set a real age or birth date	4.41*	2.78	1.41	6.27
Set a real school name	4.11*	2.55	1.11	5.37
Set personal phone number	6.87*	2.94	3.87	18.16
Set your real name or surname	5.26*	3.11	2.26	10.62

*p<.001

As it can be seen in Table 2, all forms of risky behaviour online has been rated as risky and these results are statically significant (p<.001). As the riskiest behaviours online has been rated: *posting photos of age forbidden behaviour* (t=23.48, p<.001), *visiting pornographic sites* (t=20.13, p<.001), *talking about sexual things* (t=16.47, p<.001), *setting personal phone number* (t=18.16, p<.001), *accepting strangers to friends' list* (t=14.22, p<.001), and *posting personal photos* (t=14.93, p<.001).

6.3. Predictions of adolescents' perceptions of risky online behaviour by sociodemographic characteristics

In order to evaluate students' perception of risky online behaviour taking into account their demographical characteristics (gender, age) and engagement in risky behaviour online, the linear regression analysis with enter method were used. The scale of students' perception of risky online behaviour was chosen as a depended variable. As independent variables were chosen: gender (1- male, 2- female), age, and the engagement in risky online behaviour (1- not risky at all, 10 – very risky).

Table 03. Prediction of students' perception of risky online behaviour by students' age, gender, and engagement in risky behaviour online (N=152)

Variables	Perception of risky online behaviour		
	B	SE B	β
Age	-2.16	.84	-.21**
Gender	7.99	2.88	.22*
Engagement in risky behaviour online	-.57	.23	-.20**
R ²	.15		
F	7.99*		

*p<.01; **p<.02

Table 3 shows that regression model is statistically significant ($R^2=.15$, $F(3, 138)=7.99$, $p<.001$). As it can be seen in the Table 3, students age ($p<.02$), gender ($p<.01$), and engagement in risky behaviour online ($p<.02$) predicts their possible perception of risky behaviour online. Thus, it is possible to say that younger ($\beta=-.28$, $p<.02$), less engaging in risky behaviour online ($\beta=-.20$, $p<.02$), and female ($\beta=.22$, $p<.01$), students are more likely to perceive risky behaviour online as risky.

7. Conclusion

The aim of this study was to find out how adolescents perceive risky online behaviours and importance of age and gender for the prediction of their perception. The results of the study has shown that adolescents perceive risky behaviours online as risky and this perception is related to their age and personal engagement in risky online behaviours.

As it was already mentioned, adolescents are able to rate risky behaviours online as risky. It means that adolescents are aware of online risks. In other words, it is possible to predict that adolescents have enough knowledge of what kind of activities online is risky, however, they are still engaging in it. There are some possible reasons explaining these results. Sensation-seeking (Notten, Nikken, 2014) and inability to self-regulate their online behaviour (Mubarak, Mani, 2015) might be important. In other words, as sensation-seeking and self-regulation skills are still developing at the stage of adolescence (Giedd, 2012; Steinberg et al., 2008), high in sensation-seeking and low in self-regulation skills adolescents are more likely to engage in risky behaviours online even if they know that their behaviour might be risky. On the other hand, as peers play a significant role in adolescents lives, their engagement in risky online behaviours may also be a reason of adolescents engagement in risky behaviours online

(Knoll et al., 2015). It means that if adolescents perceive their peers as engaging in risky behaviours online, they may also be likely to engage.

Moreover, it has also shown that only those older male students, who engage more in risky online behaviours, rate risky behaviours as less risky. These results go along with recent studies noting that boys are more likely than girls to engage in risky online behaviours (Baumgartner, Valkenburg, Peter, 2011; Livingstone et al., 2011). In general, males are called as gender of risks offline because of higher levels of sensation-seeking than females (Steinberg et al., 2008). Thus, it would be possible to predict that in online settings this gender gap is also present. Noll, Chad and Barnes (2013) have also found out that adolescents, who engage in risky behaviours, are less able or likely to identify the consequences of risky online behaviours. In other words, the more adolescents engage in risky behaviours online, these behaviours become more appropriate and, probably, are evaluated as normal and casual behaviour. Moreover, the study of Baumgartner and colleagues (2010) has also shown that adolescents engagement in risky sexual behaviour online is higher if they perceive their peers as engaging in risky sexual behaviours online, assessed more benefits than risks. However, in our study these cognitive aspects haven't been measured. Thus, future research should include these cognitive in order to better understand why adolescents' engage in risky behaviours online.

This study has shown that adolescents' perception of risky online behaviour should be researched further in order to gain better understanding of adolescents' reasons to engage in risky behaviours online even if they can perceive it as risky. Moreover, more attention of policy makers, educators should be paid in educating adolescents on risky online behaviours forms and possible coping strategies.

Despite the meaningful results described above, this study has some limitations also. One of them is that in this study we didn't measure any cognitive, emotional or social factors which may be related to adolescents tendency to engage in risky behaviours online. Thus, future research should pay attention in introducing these factors in the research of adolescents' risky behaviour online. Moreover, it is still unclear if higher usage of the Internet is a cause or consequence of adolescents' engagement in risky behaviours online. This missing gap in the research of risky behaviour online may be filled in by conducting longitudinal studies.

Acknowledgments

This study was funded by Vytautas Magnus University Science Fund for Research Cluster Projects (VMU Rector's order No. 408, October 31, 2016; Projects registration No. P-S-16-06).

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