Cyberbullying among Adolescents: Bullies and Victims Associated with Parental Relations, Online Usage Time and Gender Differences

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Foreword

Submitted in partial fulfillment of the requirements of the BSc Psychology degree, Reykjavik University, this thesis is presented in the style of an article for submission to a peer-reviewed journal.
Abstract – English

With increased technology, easier access of information, and faster communication ways, a new type of bullying has been rising globally labeled cyberbullying. Cyberbullying is common and harmful among adolescents that can have extensive consequences. Whereas cyberbullying often happens in adolescent’s homes, the aim of current study was to examine parental relations and online usage time and see these factors might have influence on both cyber-bullies and cyber-victims. The study used archival data from the Icelandic Centre for social Research and Analysis (ISCRA), Youth in Iceland 2014. Random sample consisted of 2,017 participants was used from a population of 11,013 Icelandic secondary school students. Participants were 14-16 years old. Logistical regression was used in the study and results indicated that low parental support and frequent online usage time increased the likelihood of becoming a cyber-bully or a cyber-victim. Parental monitoring did show significant relation to cyber-bullies but not to cyber-victims. Furthermore, females were more likely to become cyber-bullies and cyber-victims.

Keywords: Adolescents, cyber-bullies, cyber-victims, parental support, parental monitoring, online use, gender

Abstract – Icelandic


Lykilhugtök: Unglingar, gerendur neteinelits, þolendur neteinelits, foreldra stuðningur, foreldra eftirlit, kynjamunur
Cyberbullying Among Adolescents: Bullies and Victims Associated with Parental Relations, Online Usage time and Gender Differences

For the past years, bullying has been brought up as an important social problem that requires factual understanding in regards to both prevention and intervention (Semenyna & Vasey, 2015). With increased technology, easier access of information, and faster communication ways, a new type of bullying has been rising globally labeled “cyberbullying”. Cyberbullying may be defined as an aggressive act carried out by an individual or a group using technology to intentionally and repeatedly harass others who cannot defend themselves easily (Bauman, 2009; Smith et al., 2008). Cyberbullying is common among adolescents that can have extensive consequences (Raskauskas & Stoltz, 2007). Currently, research on cyberbullying is at an early stage of investigation (Slonje & Smith, 2008). However, researchers and educators are concerned that this problem is growing more rapidly than educators and parents can respond to (Bauman, 2009).

Cyberbullying among adolescents is common and harmful. Icelandic research showed that 15% adolescents aged 13-15 years old had once or more frequently sent hurtful messages through the internet and 25% had once or often been a victim of cyber-bullying (Pálsdóttir et al., 2014). Cyberbullies are associated with hyperactivity, behavior problems, substance use and physical symptoms (Sourander et al, 2010). Victim of cyberbullying is associated with social problems and depressive symptoms, school refusal and physical symptoms (Hinduja & Patchin, 2008; Ybarra & Mitchell, 2004; Sourander et al., 2010). Significant emotional harm can be caused by cyberbullying. Victims of cyberbullying suffer equal if not greater psychological harm then those who experience traditional bullying. That may be explained by the hurtful information that can easily be transmitted in a short time and can be difficult to eliminate (Feinberg & Robey, 2009).

Cyberbullying has in a short time changed the pattern of how adolescents approach their target. Cyberbullying can both be described as direct bullying and indirect bullying (Snakenborg, Van Acker, & Gable, 2011). The direct form of bullying is when messages are
directly sent from the bully to the victim. The indirect form of bullying is when the bully gets another person to bully the victim. Cyberbullying has also been described as heated arguments, harassment, denigration, forwarding messages that contains personal information (e.g. sexually orated communications) and cyberstalking (Willard, 2007). Most common form of cyber-bullying is placing derogatory things on someone else’s website (e.g. Facebook) as well as sending negative or harmful personal messages to a person (Dredge, Gleeson, & De la Piedad Garcia, 2014). What makes cyberbullying differ from traditional bullying is that the imbalance in power is not as visible in online relationships, which implies that it is more likely that anyone can become a victim of cyberbullying (Beale & Hall, 2007).

Offender of Cyber-bullying

Cyberbullies have the ability to keep their identity unknown, which helps the bully maintain dominance online (Ybarra & Mitchell, 2004). Because of the lack of face to face contact with the victim, cyber-bullies do not realize the level of harm that is produced by their behavior. Therefore, cyber-bullies are unlikely to experience feelings like compassion and sympathy toward the victim (Strom & Strom, 2005). Spriggs and peers (2007) found that almost over 25% of students from 11-14 years old had cyberbullied someone, where 7% revieled that they did it because they thought it was funny. Theses results might be associated with lack of awareness of possible consequences the victim may experience.

Victim of cyber-bullying

Cyber-bullying can have long-term effects on the victim and his or her family and friendships (Kowalski & Limber, 2007). The victim of cyber-bullying can be attacked any time of day or night because of the constant connection via the internet (Patchin & Hinduja, 2006). This makes it more difficult for the victim to get away from their attackers unlike in a traditional bullying situation (Slonje & Smith, 2008). Hinduja and Patchin (2008) found that 19% of internet users between 10 and 17 years old had been cyberbullied. The older the adolescents are, their online use increases, which is one of the possible reasons why they are at higher risk of becoming victims (Kowalski & Limber, 2007; Smith et al., 2008).
One of the most worrying aspect of cyber-bullying is that it most often occurs in some kind of isolation which makes it hard to monitor adolescent’s actions. Numbers show that 80% of adolescents use the internet at their home (SAFT, 2013), which implies the importance of parental involvement in intervention. It is important to find appropriate approach to provide assistance for bullies, victims and parents to prevent bullying from happening. Therefor, it is necessary to investigate factors that might have influence on both cyber-bullies and cyber-victims. Results from earlier studies (Ybarra & Mitchell, 2004; Hertz & Ferdon, 2011) have shown that parents and online usage time are important factors when it comes to cyber-bullying which increases the importance of a closer look.

Parental support

Parental support has been defined as parental behaviors toward the child, such as physical affection, complimenting and encouraging, which indicates that the child is both accepted and loved (Rollins & Thomas, 1979). Results from previous studies have shown that parents are important when it comes to social influences associated with cyber-bullying and cyber-victimization (Wang, Iannotti, & Nansel, 2009). Parental practices, such as parental support or warmth are preventive factors for adolescents involvement in bullying perpetration and victimization (Bowers, Smith, & Binney, 1994; Haynie et al., 2001; Ybarra & Mitchell, 2004; Spriggs, Iannotti, Nansel, & Haynie, 2007).

In a study by Ybarra and Mitchell (2004), cyber-victims had stronger emotional bonds to their parents compared to cyber-bullies. Spriggs and peers (2007) results showed the opposite, where cyber-bullies were more associated with family factors compared to cyber-victims. Additionally, in a study of 733 Canadian students, greater online aggression was associated with lack of communication with parents, but not to parental monitoring, such as effort to control the internet use (Law, Shapka, & Olson, 2010).

Parental monitoring

It is important for parents to pay as much attention to what their children do online as they do to their hobbies and companionships. (Eastin, Greenberg, & Hofschire, 2006).
Parental monitoring refers to the parental act to protect their children from any exposure to dangers online (Livingstone, 2007). Lenhart and peers (2011) reported that 86% of teens online and cell phone users had never received any advice on how to use the internet safely and responsibly from their parents. Low monitoring has been linked to increased likelihood of their children being cyber-bullies (Na, Dancy, & Park, 2015; Peker, 2015). Interestingly, Ybarra and Mitchell (2004) found that over half of youths who reported having been a cyber-victim had poor parental monitoring.

**Internet usage time**

Another possible risk factor for both cyberbullying and cyber-victimization is duration of internet use. Herts and Ferdon (2011) reported that youth spend as much time online as they do offline. In an Icelandic survey, over 50% of children and adolescents aged 10-16 years spent between one and three hours online per day. In the same report, the increase in frequency of online use was 20% between 2009 and 2014 (SAFT). Internet usage time has been associated with increased risk of being a cyber-bully or a cyber-victim (Hinduja & Patchin, 2008). According to Juvonen and Gross (2008) heavy internet use (more than three hours per day) did significantly increase the likelihood of becoming a cybervictim. However, results from Peker’s (2015) study showed that likelihood ratio test for cyber-bullies was significant for internet usage time but not significant for cyber-victims. The main reason for this differentiation might be because Juvonen and Gross (2008) only focused on cybervictims, while Peker (2015) studied the difference between cyber-bullies and cyber-victims.

**Sex difference**

Earlier studies that focused on cyber-victims have shown consistent pattern where females are more often victims of cyber-bullying (Kowalski & Limber, 2007; Mesch, 2009; Connell, Schell-Busey, Pearce, & Negro, 2013; Smith et al., 2008). Mech (2009) examined data from over 900 U.S. adolescents and found that 61% females reported having been cyber-victims at least once in their lifetime against 39% of males. Another study of 1671 Spanish students showed that females were more likely to report being cyber-victims (Ortega, Elipe,
Mora-Merchán, Calmaestra, & Vega, 2009). However, Juvonen and Gross (2008) results did not indicate significant difference between genders.

Earlier studies on cyber-bullies have not been consistent and tend to report no significant differences between genders (Hinduja & Patchin, 2008; Patchin & Hinduja, 2006). Slonje and Smith (2008) and Peker (2015) on the other hand reported males being more likely to become cyber-bullies. For instance, Vandebosch and Van Cleemput (2009) did a large survey with students from Belgium and found that males were significantly more likely to participate in offensive Internet and mobile phone practices, such as making insults or threats, compared to females.

The present study

Still today, there is a lack of knowledge about the association between parental influences and online behaviors for Icelandic youth. The aim of the present study was to investigate the association of parental involvement, online usage time and gender on cyber-bullying behavior among children. Based on the earlier studies discussed, the hypothesis are the following:

1. Females are more likely to become cyber-victims compared to males.
2. Males and females are just as likely to become cyber-bullies.
3. Adolescents who experience low parental support and monitoring are more likely to become cyber-bullies and become victims of cyber-bullying.
4. Adolescents who spend more time on the internet are more likely to become cyber-bullies and become victims of cyber-bullying.

Method

Participants and settings

Current paper used collected data from the Icelandic Centre for Social Research and Analysis (ISCRA). The survey was administered in February 2014. Students from all secondary schools in Iceland attending school that day answered a standardized based research called Youth in Iceland (Pálsdóttir et al., 2014). There were 11,013 students from 8th,
9th and 10th grade (14-16 years old) who answered the survey. A random sample of 2017 answers was used. There were 991 males (49.6%) and 1008 (50.4%) females but 18 participants did not specify their gender. Participants did not receive payment or any reward for participating in the study.

**Procedure**

Before data collection, administrator from each school sent all parents of students under the age of 18 an introductory letter to make sure they had the opportunity to withdraw their children from the study. If parents did not respond, it was considered as a consent for participation in the study (see Appendix A). Questionnaires were sent to all middle schools in Iceland with instructions from ISCRA (Pálsdóttir et al., 2014). When administering the questionnaire, the teachers told the students not to write their name or social security number in order to exclude the chance of tracking someone’s answers. The teachers also stated that the student’s answers would be untraceable. Students were asked to answer all the questions conscientiously. If the students needed any help they were asked to close their questionnaire, raise their hand, and ask the teacher for further explanations. When the students had finished answering the questionnaire, they were asked to put the questionnaire into a blank envelope, and close it before they turned it to the teacher.

**Measurements**

A detailed questionnaire by Hrefna et. al (2014) was used in this study. The questionnaire consisted of 82 questions on 28 pages. In the current study, the researcher used 13 questions to test the hypothesis (see Appendix B). Independent variables used in this study were, gender (male = 1, female = 2), parental support, parental monitoring and online usage time.

The measurement for parental support consisted of the following questions: “How easy or hard is it to get from your parents: care and warmth, discussing personal matters, advice about your studies and advice about other things?”.

The measurement for parental monitoring consisted of the following questions: “My
parents have certain rules about what I can do at home”, “My parents have certain rules about what time I have to be home at nights”, “My parents monitor whom I am with during evenings” and “My parents monitor where I am during the evening”. Four-point Likert scale was used in all questions about parental support and parental monitoring. Participant had to indicate how well each statement described them (1=very hard, 2=rather difficult, 3=rather easy, 4=very easy).

Time spent on social media was measured by one of the following question: “How much time per day do you spend on social media i.e. Facebook, Twitter, Instagram, Snapchat, Vine, Tumpl?”. The question had eight choices, “almost no time”, “1/2 – 1 hour”, “about one hour”, “about two hours”, “about three hours”, “about four hours”, “about five hours”, “six hours or more”.

The depended variables were two, cyber-bully and cyber-victim. Participants had to indicate if they had ever cyberbullied someone or if they had ever been a victim of cyberbullying. The question about bullying perpetration was “Have you ever in your life sent nasty or hurtful messages to a person or a group through the internet?”. The question about bully-victim was “Have you ever in your life received nasty or hateful message from a person or a group through the internet?”. Five-point Likert scale was used in both questions. Participants had to indicate how well each statement described them (1=never, 2=only once, 3=two times, 4=three to four times, 5=five times or often). Both questions about cyberbullying were separately split into two groups. Those who answered “never” were in one group, and those who answered either “only once”, “two times”, three to four times” and “five times or often” were in another group.

**Design and data analysis**

In the current study a Binary Logistical Regression was used to find out how well the set of predictor variables predicted or explained the categorical dependent variables. Descriptive statistics were used to see the prevalence in cyber-bullying and the cyber-victimization. Spearman’s rho correlation was used to see relationship between independent
variables. Two models were used in the study. For model 1, the researcher ran binary logistical regression two times, first to examine the relation between cyber-victimization and three independent variables (gender, parental support, parental monitoring) and second to examine the relation between cyber-bullies and three independent variables (gender, parental support, parental monitoring). For model 2, the researcher ran binary logistical regression two times, first to examine the relation between cyber-victimization and four independent variables (gender, parental support, parental monitoring and time spent on social media) and second to examine the relation between cyber-bullies and four independent variables (gender, parental support, parental monitoring and time spent on social media).

**Results**

Based on total answers, 280 participants or 14.3% reported that they had cyber-bullied someone once or more often in their lifetime. Of all the cyberbullies, 118 or 42% were male and 162 or 58% were female. Total of 473, or 24.2% of participants reported that they had been a victim of cyber-bullying at least once in their lifetime. Of all the cyber-victims 149 or 32% were male and 324 or 68% were female. Table 1 shows the descriptive statistics of parental support, parental monitoring and time spent on social media.

Table 1

*Descriptive table for scales used in this study*

<table>
<thead>
<tr>
<th>Scale</th>
<th>n</th>
<th>Min.</th>
<th>Max.</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental support</td>
<td>1960</td>
<td>0</td>
<td>15</td>
<td>12.576</td>
<td>2.964</td>
</tr>
<tr>
<td>Parental monitoring</td>
<td>1942</td>
<td>0</td>
<td>12</td>
<td>8.668</td>
<td>2.513</td>
</tr>
<tr>
<td>Online usage time</td>
<td>1918</td>
<td>1</td>
<td>8</td>
<td>3.575</td>
<td>1.826</td>
</tr>
</tbody>
</table>

Table 2 shows the correlation between the independent variables in the study. It demonstrates that parental monitoring ($r = .137, p < .01$) and online usage time ($r = .188, p < .01$) was positively related to gender and parental monitoring was positively related to
parental support ($r = .285, p < .01$). Online usage time was negatively related to parental support ($r = -.058, p < .05$). No significant relation was found between parental support and gender ($r = .017, p > .05$) and between parental monitoring and online usage time ($r = -.26, p > .05$).

Table 2

*Spearman’s rho bivariate correlations for the variables in the study*

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th>Parental support</th>
<th>Parental monitoring</th>
<th>Online usage time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.017</td>
<td>.137**</td>
<td>.188**</td>
<td></td>
</tr>
<tr>
<td>Parental support</td>
<td></td>
<td>.285**</td>
<td>-.058*</td>
<td></td>
</tr>
<tr>
<td>Parental monitoring</td>
<td></td>
<td></td>
<td>-.026</td>
<td></td>
</tr>
<tr>
<td>Online usage time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05 (two-tailed test)

**p < .01 (two-tailed test)

**Victim of cyber-bullying**

In table 2, model 1, the results for logistical regression for gender, parental support and parental monitoring are shown when predicting for cyber-victim. The results showed significant relation for gender and parental support. No significant relation for parental monitoring was found. Positive relationship was between gender and cyber-victims, which indicated that females were more likely to become cyber-victims. Radio odds of becoming a cyber-victim were 2.6 times higher if the person was a female when other variables were controlled. According to Negelkerke’s adjusted value, this model explained 8.6% of the variance of the dependent variable, victim of cyberbullying ($\chi^2(3) = 109.9, p < .001$). The predictor variables improved prediction success by 0.1% (prediction success overall was 75.5%, 98.6% for non-cyber-victims and 4.8% for cyber-victims).

Results for model 2, after an additional variable was put into the model, are depicted in table 3. The additional variable was the time spent on social media. Significant relation was found for gender, parental support and time spent on social media, but not for parental monitoring. As with model 1, for model 2, positive relationship was between gender and
cyber-victims that indicated that female students were more likely to become cyber-victims. Radio odds of becoming a cyber-victim were 2.3 times higher if the person was a female when other variables were controlled. Second most important predictor was time spent on social media. The radio odds of becoming a cyber victim increased 1.3 times with every one unit, when other variables were controlled. Negelkerke’s adjusted value for model 2 explained 14.5% of the variance on the dependent variable, victim of cyber-bullying ($\chi^2(4) = 184.9, p < .001$). The predictor variables improved prediction success by 1.3% (prediction success overall was 76.6%, 96.6% for non-cyber-victims and 16.4% for cyber-victims).

Table 3

*Logistical regression for model 1 and model 2 when predicting cyber-victims*

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>S.E.</td>
<td>p</td>
<td>Exp(B)</td>
<td>B</td>
<td>S.E.</td>
</tr>
<tr>
<td>Gender</td>
<td>.949</td>
<td>.117</td>
<td>.000</td>
<td>2.584</td>
<td>.819</td>
<td>.122</td>
</tr>
<tr>
<td>Parental support</td>
<td>-.110</td>
<td>.018</td>
<td>.000</td>
<td>.896</td>
<td>-.103</td>
<td>.019</td>
</tr>
<tr>
<td>Parental monitoring</td>
<td>.018</td>
<td>.024</td>
<td>.449</td>
<td>.982</td>
<td>-.008</td>
<td>.025</td>
</tr>
<tr>
<td>Online usage time</td>
<td></td>
<td>.267</td>
<td>.031</td>
<td>.000</td>
<td>1.306</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-1.100</td>
<td>.311</td>
<td>.000</td>
<td>.333</td>
<td>-2.083</td>
<td>.348</td>
</tr>
</tbody>
</table>

**Offender of cyber-bullying**

In table 5, model 1, the results for logistical regression for gender, parental support and parental monitoring are shown when predicting for being a cyber-bully. The results showed significant relation for all variables, gender, parental support and parental monitoring. Positive relationship was found between gender and cyber-bullies, which indicates that females were more likely to become a cyber-bully. The odd ratio of becoming a cyber-bully was 1.4 times higher if the person was female, when other variables were controlled. According to Negelkerke’s adjusted value, this model explained 2.3% of the variance of the dependent variable, cyber-bully ($\chi^2(3) = 24.3, p < .001$). However, the predictor variables did
not contribute any improvement in prediction success (prediction success overall was 85.5%, 100% for non-cyber-bullies and 0% for cyber-bullies, exactly the same as the null model).

Results for model 2, after an additional variable was put into the model, are depicted in table 6. In table 5. The additional variable was the online usage time. Significant relation was found for parental support and online usage time. Gender was not significantly related to cyber-bullies. When time online usage time increases one unit, the odds that the case can be predicted increases by a factor of 1.3 times, when the other variables are controlled.

Table 4
*Logistical regression for model 1 and model 2 when predicting cyber-bullies*

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>S.E.</td>
<td>p</td>
<td>Exp(B)</td>
<td>B</td>
<td>S.E.</td>
<td>p</td>
</tr>
<tr>
<td>Gender</td>
<td>.352</td>
<td>.352</td>
<td>.010</td>
<td>1.422</td>
<td>.218</td>
<td>.142</td>
<td>.124</td>
</tr>
<tr>
<td>Parental support</td>
<td>-.066</td>
<td>.021</td>
<td>.002</td>
<td>.936</td>
<td>.053</td>
<td>.022</td>
<td>.018</td>
</tr>
<tr>
<td>Parental monitoring</td>
<td>-.061</td>
<td>.027</td>
<td>.025</td>
<td>.940</td>
<td>.055</td>
<td>.028</td>
<td>.053</td>
</tr>
<tr>
<td>Online usage time</td>
<td>-.982</td>
<td>.360</td>
<td>.006</td>
<td>.375</td>
<td>1.975</td>
<td>.405</td>
<td>.000</td>
</tr>
</tbody>
</table>

Negelkerke´s adjusted value for model 2 explained 7.3% of the cyber perpetrator value ($\chi^2(4) = 75.378, p < .001$). However, the predictor variables decreased prediction success by 0.1% (prediction success overall was 85.5%, 99.9% for non-cyber-victims and 0% for cyber-victims).

Discussion

The aim of the present study was to examine how well parental support and parental monitoring, gender difference and online usage time predicted in cyber-bullies and cyber-victims among secondary school students. Two main focuses were in the study, first to examine how much gender, parental support and parental monitoring predicted in both cyber-
bullying and cyber-victimization. Second focus was to examine the changes when a new independent variable, internet usage time, was added into the model.

Results of the current study indicated that females were more likely to be victims of cyberbullying, which support the first hypothesis. This finding is parallel with earlier researches (Kowalski & Limber, 2007; Mesch, 2009; Connell, Schell-Busey, Pearce, & Negro, 2013; Smith et al., 2008). Results also showed that females were more likely to become a cyber-bully for model 1, which does not support the second hypothesis that both males and females are just as likely to become a cyber-bully. When internet usage time was added to the model, gender became insignificantly associated with cyber-bullies, resulting in no gender difference, which does support the second hypothesis and are in line with earlier studies (Hinduja & Patchin, 2008; Patchin & Hinduja, 2006). However, results were inconsistent with Peker’s (2015) study where males were more likely to become cyber-bullies, and no significant relation was found to be a cyber-victim. Reason for the inconsistency between current study and Peker’s (2015), might be explained in such way that in previous study participants who had both bullied someone and been a victim of cyber-bullying were put into one group (cyber-bully/victim), and those who had only bullied or been a victim were put into separate group. Whereas, current study did not add together those who had been involved in both cyber-bullying and being a cyber-victim.

The third hypothesis about association between parental support and cyber-bullying was also supported. The results revealed that parental support was significant when predicting for cyber-bullies and cyber-victims. Whereas, students who had cyber-bullied or had been cyber-victim, reported lower parental support. These results are parallel with earlier results (Bowers, Smith, & Binney, 1994; Haynie et al., 2001; Ybarra & Mitchell, 2004; Spriggs, Iannotti, Nansel, & Haynie, 2007; Law, Shapka, & Olson, 2010).

Interestingly, parental monitoring was only significantly associated with cyber-bullies but not for cyber-victims. Those results supported the hypothesis that low parental monitoring was associated with cyber-bullies but was not supported for cyber-victims. These results are
parallel with earlier studies (Peker, 2015; Na, Dancy, & Park, 2015). The results of the current study might indicate that those who experienced being a cyber-victim, did not differ from those who did not experience being a cyber-victim when it comes to parental monitoring.

The fourth, and last hypothesis about internet usage time was supported by the current findings. The more time they spent on internet, the ratio odds of becoming cyber-bullies and cyber-victims got higher. For cyber-bullies, this result is parallel with Peker’s (2015) results were adolescents that spent more than 8 hours or more per week were more likely to become cyber-bullies. For victims, this result is parallel with Juvonen and Gross (2008) results, where heavy internet use did significantly increase the likelihood of becoming a cyber-victim. The main difference between current study and Juvonen and Gross’s (2008) study is that they only studied cyber-victims, however in the current study we looked at the effect on both cyber-victims and bullies.

Even though most of the independent variables in both models showed significant relation, the association was not very strong and did not explain high proportion in the dependent variables (cyber-bullies and cyber-victims). Indicating that there are other factors that have an effect (e.g. peer support or personality).

The current study is not without its limitations, we can assume that some students might undervalue their action in cyber-bullying. Research by Espelage and Swearer (2003) indicated that participants often rate their bullying less which can lead to undervaluation. Also, researcher did not assume that students that reported that they had cyberbullied someone might also have been cyber-victim at some point. As in Raskauskas and Stoltz (2007), results showed that 20% were cyber-bully, and 50% of them were cyber-victims as well.

Despite the weaknesses in the study, a large sample size was used in this age group in Iceland, 86.3% completed the questionnaire which made a good reliability. Also, the study included both genders were response rate was equal. Another strength was anonymity, which made it easier for the students to respond truthfully to each question. Furthermore, this survey
is administered often which makes it easy to monitor various factors among adolescents.

In conclusion, the results indicated that being a female, experience low parental support and monitoring, and frequent internet usage time increased the risk of becoming cyber-bully and cyber-victim. Both research and public have begun to recognize the seriousness of this issue. However, there is still much we do not know about cyberbullying. Findings of current study give a better understanding of the importance of parental involvement among adolescents. In addition, researchers still have a long way to go when trying to understand cyber-bullying. Also, it is important to keep examining the relations of different risk factors to be able to design effective interventions.
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Appendix A

Consent letter to parents

Rannsóknir & Greining
Háskólanum í Reykjavík

Reykjavík 2. febrúar 2014

Ungt fólk 2014

Rannsókn á högum og liðan nemenda í 8. – 10. bekk á Íslandi.

Ágætu foreldrar í forráðamenn.


Megindherslur rannsóknanna Ungt fólk eru þær sörnina í ár og áður hefur verið og þá að því að þæta hagi og liðan ungmenna og felagslega þetta svo sem tengsl við forðlað og virki, ljóðtí og lóðnatundir, felagalíf, líðan, sérliki, maturæði, nám, brottlausahættu, felagslega aböðu, sverfvingur, lestur, tölunokun (skjóatöku, vinsmúlahæfti, framhaldarform og annað mikilvægt.

Sem fyrir er Ungt fólk könnunnar uninn samkvæmt lögum um persónuvernd, er nafnlaus og því ekki hægt að rekja nýnaðar upplýsingar til einstaklinga. Nemendur eru sérstaklega beðnað að ríta hverki nán sitt nán kvenntöku á spurningalistu. Þegar útfyllingu spurningalistanna er leiki leggja nemendur þá fætur umslag og loks valdið öður en listumum er aðhefur sær. Lístalir eru svo sendir greiningaráðum sem tölusvækk upplýsingarnar þess að gerð með norður mot vítau hverjum þær líðhrytt. Ólí góg rannsóknanna eru þorsinnareykjanleg. Að skráningu lokinnr er spurningalistunum eytt. Körninun tekið að mestuðili um 50 mínutur.

Pessaar upplýsingar eru sendir til að upplýsja þeg um fyrirhugaða gagnafallin. Ef þú öskur elfir að barn þitt barn þitt taki ekki það í Ungt fólk könnuninni í ár, hafðu þá samband við starfsfólk Rannsókn & greiningir með tölvupósti rannsoknir@rannsoknir.is eða í síma 599 9431.

Verði þátttaka góg koma upplýsingarnar til með að skila mikilvæðum nöburstæðum, þaði hagnýttum og fræðilegum líkt og fyrri kunnar af þessu tagi hafa gort.

Ef nánar upplýsingar er óskað þá vinsamega hafði samband við Rannsóknar & greiningu.

Með þærri kveðjum
Starfsfólk Rannsóknar & greiningar.
Appendix B

Questionnaire

1. Er þú strákur eða stelpa?
   - [ ] Strákur
   - [ ] Stelpa

21. Hversu auðvelt eða erfitt væri fyrir þig að fá eftirtalið hjá foreldrum þínunum?
   (Merkut í EINN reit í hverjum líð)

<table>
<thead>
<tr>
<th></th>
<th>Mjög erfitt</th>
<th>Frekar erfitt</th>
<th>Frekar auðvelt</th>
<th>Mjög auðvelt</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Umhyggju og hlýju</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>b) Samnæður um persónleg málefní</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>c) Ráðleggingar varðandi námíð</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>d) Ráðleggingar varðandi önnur verk (viðfangsefní þín)</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>e) Aðstoð við ýmis verk</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Á mjög vel við um mig</th>
<th>Á frekar vel við um mig</th>
<th>Á frekar illa við um mig</th>
<th>Á mjög illa við um mig</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Foreldrar mínir setja ákveðnar reglur um hvener á að vera komin(n) heim á kvöldin</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>b) Foreldrar mínir setja ákveðnar reglur um hvener á að vera komin(n) heim á kvöldin</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>c) Foreldrar mínir fylgja med því með hverjum þegar eld er á kvöldin</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>d) Foreldrar mínir fylgja med því fyrir hverjum þegar eld er á kvöldin</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

65. Hversu oft hefur þetta gerst hjá þér um sævina? (Merkut í EINN reit í HVERJUM líð).

<table>
<thead>
<tr>
<th></th>
<th>Aldrei</th>
<th>Einu sinni</th>
<th>Tvisvar sinnum</th>
<th>3-4 sinnum</th>
<th>5 sinnum eða oftar</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Þú send andstyggleg eða særandi skilaboð til einstaklings eða hóps á Netimu</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>b) Þú fengið andstyggleg eða særandi skilaboð frá einstaklingi eða hópi á Netimu</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
70. Hversu miklum tíma verð þú að jafnaði í efritalið á hverjum degi?

<table>
<thead>
<tr>
<th>Nær engum tíma</th>
<th>½-1 klst.</th>
<th>Um 1 klst.</th>
<th>Um 2 klst.</th>
<th>Um 3 klst.</th>
<th>Um 4 klst.</th>
<th>Um 5 klst.</th>
<th>6 klst.</th>
<th>eða fleiri</th>
</tr>
</thead>
</table>

d) Vera á samskipatvöðum á Netinnu:
   t.d. Facebook, Twitter, Instagram, Vine,
   Tumblr, WhatsApp, Snapchat, Skype o.fl.