Cyber bullying, traditional bullying and depression

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Abstract

With increased technological evolution and availability of the Internet, a new form of bullying has developed called cyber bullying. The hypothesis is that victims of cyber bullying show more symptoms of depression than victims of traditional bullying.

Participants in this research were from a random sample of 2000 children drawn from a population study carried out by The Icelandic Centre for Social Research (ICSRA). The participants were in grades five through seven in primary school in Iceland. The data were collected with administration of a questionnaire. The independent variables were gender, victim of cyber bullying, victim of traditional bullying and traditional bully. The dependent variable was depression. The prevalence of cyber bullying was between 0.5% and 1.4% and for traditional bullying it was between 1.5% and 3.6%. The hypothesis was not supported, even though being a victim of cyber bullying had shared variability with depression of 10.2% it was not more than the shared variability of victim of traditional bullying and depression (14.0%). These results indicate that being a victim of cyber bullying has psychological impact though less than for a victim of traditional bullying.

Útdráttur

Með aukinni tækniþróun og aðgengi að veraldarvefnum hefur myndast nýtt form eineltis kallað neteinelti. Kenningin er að fórnarlömb neteineltis sýni meiri þunglyndiseinkenni en fórnarlömb hefðbundins eineltis. Þátttakendur í þessari rannsókn eru úr tilviljunarkenndu úrtaki 2000 barna tekin út úr þýðisrannsókn framkvæmd af Rannsóknum og greiningu. Þátttakendur voru í fimmta til sjöunda Bekk í grunnskóla í Íslandi. Gögnum var safnað með notkun spurningalista. Óháðu breyturnar voru kyn, fórnarlamb neteineltis, fórnarlamb hefðbundins eineltis og hefðbundinn gerandi. Háð breyta var þunglyndi. Algengi neteineltis var 0.5% til 1.4% og fyrir hefðbundið einelti var algengi 1.5% til 3.6%. Kenningin var ekki studd, en jafnvel þó að þolendur neteineltis hafi sýnt 10.2% sameiginlegt frávik þunglyndis, var það minna en sameiginlegt frávik fórnarlambs venjulegs eineltis og þunglyndis (14.0%). Niðurstöðurnar benda til að það að vera fórnarlamb neteineltis hefur minni sálræn áhrif en það að vera fórnarlamb hefðbundins eineltis.

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Cyber bullying, traditional bullying and depression

With the technological evolution and increased availability of the Internet, as well as decreased prices of computers, computer equipment and mobile phones, technology has become available to more people (Atkinson and Newton, 2010). In Iceland, 99.3% households with children under 16 years had access to computer and the Internet in 2012 (Statistics Iceland, n.d.).There are many positive sides to the increased availability of technology and the Internet but there are also negative sides to this evolution. One of the negative sides of this evolution is a new form of bullying which is called cyber bullying or electronic bullying, here after referred to as cyber bullying (Atkinson & Newton, 2010; Smith et al., 2008). Before going into the definition of cyber bullying there is a need to explain what bullying is.

Bullying, here after referred to as traditional bullying, is when there are negative actions of one or more persons toward another person which happen repetitively over time and there is a power imbalance between the bully or bullies and the victim where the victim has difficulty defending him or herself (Olweus, 1994, 1996). According to Olweus (1994, 1996), bullying, here after referred to as traditional bullying, needs to meet three conditions to be called bullying. There is *a negative action* of one or more persons towards another person, it happens *repetitively over time* and there is *power imbalance between the bully/bullies and the victim where the victim has difficulty or can't defend him or herself against the bully or bullies (Olweus, 1994, 1996).*
The negative actions can be verbal, physical and/or relational along with being direct and/or indirect (Olweus, 1994, 1996; Raskauskas, 2007). When someone, intentionally, inflicts or attempts to inflict injury or discomfort to another it is considered to be negative action (Olweus, 1994, 1996).

Physical and verbal bullying often co-occurs in traditional bullying (Raskauskas and Stoltz, 2007). Direct bullying can be physical and/or verbal and is defined as relatively open attack of the bully or bullies against the victim (Olweus, 1996; Raskauskas and Stoltz, 2007). Indirect bullying can be in a form of verbal bullying and/or relational bullying (Olweus, 1996; Raskauskas and Stoltz, 2007). Relational bullying is when verbal methods are used for psychological attacks such as rumor spreading, to humiliate and/or manipulate relationships (Raskauskas and Stoltz, 2007).

Cyberbullying

Cyber bullying is, in essence, the same as traditional bullying. It is repetitive negative action of one or more person towards another person over time and there is a power imbalance where the victim cannot easily defend him or herself (Olweus, 1994, 1996; Smith et al., 2008). What separates cyber bullying from traditional bullying is that cyber bullying takes place through electronics where the bullies use messages, pictures and webpages to harass, manipulate and harm their victims (Raskauskas and Stoltz, 2007; Smith et al., 2008). Because of the indirect nature of cyber bullying, the cyber bully does not receive direct feedback (face-to-face reaction) from the victim like the traditional bully gets (Slonje and Smith, 2008). That gives the cyber bully fewer opportunities than the traditional bully to see the impact of their actions and feel empathy or remorse for those actions (Raskauskas and Stoltz, 2007; Slonje and Smith, 2008).

It is also more difficult for the victim of cyber bullying to get away from the bullying unlike with traditional bullying (Slonje and Smith, 2008). In traditional bullying the victim can get away from the bullying when he or she gets home until the next day. In cyber bullying the victim is not necessarily safe at home because he or she can receive text messages and emails from the bully or bullies. The audience of cyber bullying can also be much larger than in traditional bullying (Slonje and Smith, 2008).

Prevalence of cyber bullying and traditional bullying

Many studies on cyber bullying have looked at the prevalence of it compared to traditional bullying in children and adolescence. A study by Smith et al. (2008) found that 6.6% of their participants had been victims of cyber bullying and 14.1% had been victims of traditional bullying. Prevalence of bullying in the study by Wang, Nansel and Iannotti (2011) was from 13.1% to 41.3% for each form of traditional bullying (physical, verbal and relational) and 9.9% for cyber bullying. Schultze-Krumbholz and Scheithauer (2009) found that more participants had experienced cyber bullying (15.5%) than traditional bullying (9.9%).

Studies have also shown that males are more likely than females to experience traditional bullying but this gender difference is not present in cyber bullying where males and females are equally likely to experience cyber bullying (Jackson & Cohen, 2012; Li, 2006; Mishna, Khoury-Kassabri, Gadalla, & Daciuk, 2012)

Depression, cyber bullying and traditional bullying

Study by Nansel et al. (2001) on bullying behaviors among US youth showed that being bullied and being a bully was related to poorer psychological adjustment. W. M. Craig (1998) found that victims of traditional bullying reported more symptoms of depression than non-victims. Wang et al. (2011) found that depression was associated with traditional bullying (physical, verbal and relational) and cyber bullying among victims, bully-victims (those that bully and are victims of bullying) and bullies. They also found that victims of cyber bullying reported higher depression than cyber bullies or cyber bully-victims, which was different from traditional bullying.

Studies on cyber bullying and depression have shown that cyber victimization is correlated with depression and victims of cyber bullying report higher level of depressive symptoms than non-victims (Baker & Tanrıkulu, 2010, 2010; Ybarra, 2004)

A research by Ybarra (2004) showed gender difference between reporting symptoms of depression and Internet harassment. Males who reported symptoms of depression were more than eight times more likely to indicate Internet harassment than males who reported symptoms of depression but were not harassed on the Internet. Ybarra (2004) found that this was not because depressed males spent more time online and therefor were at more risk to be harassed. For females the time spent online played the largest role in explaining the report of harassment.

Bullying in Iceland

Prevalence of bullying in Iceland in 2005/6 was for boys 10.3% out of 4664 reported being a victim, bully or bully-victim and 5.4% out of 4600 for girls (W. Craig et al., 2009). 2.5-6.5% children in 5th to 7th grade primary school in Iceland had sometimes or often been teased, attacked and hurt, been in a group that was attacked or left out intentionally.(H. Pálsdóttir, Sigfúsdóttir, Sigfússon, & Kristjánsson, 2011)

Cyber bullying is a relatively new field to study in general and in Iceland little has been researched on that subject. Pálsdóttir (2011) studied in her master thesis the views and ideas of 9th and 10th graders in Iceland towards cyber bullying. Her research suggested that there is a limited knowledge and understanding on cyber bullying among adolescents.

Current study

The purpose for this research is to look at the prevalence rate of cyber and traditional bullying and to compare victims of cyber bullying and victims of traditional bullying with symptoms of depression in children in primary school in Iceland. The hypothesis is that victims of cyber bullying show more symptoms of depression than victims of traditional bullying.

Method

Participants

A random sample of 2000 children was drawn from a population study of 11267 children in grades five through seven (9-12 years old) carried out by The Icelandic Centre for Social Research (ICSRA). Out of the 2000 children, 977 were boys, 986 were girls and 37 didn't disclose their gender. There was no exclusion criterion though children who were not present at the time of administrations were excluded. The participants were not obligated to answer the questionnaire.

Design

The independent variables were gender, cyber victim, traditional victim and traditional bully. The dependent variable was depression.

The questions from this study come from a questionnaire that has been developed through the years, first by the Icelandic Institute for Educational Research and then by the Icelandic Centre for Social Research and Analysis (H. Pálsdóttir et al., 2011). The questionnaire looks at the situation, feelings and social components of children in grades five through seven.

Out of the 56 questions in the questionnaire, seven questions were used in this research (for details of the questions used see Appendix A). The questions concerning victim of cyber bullying were in the questionnaire for the first time. Four questions had sub questions which were combined into scales. The scales were cyber victim, traditional victim, depression and traditional bully. All scales had high reliability.

The cyber victim scale (Chronbach's $\alpha = .776$), traditional victim scale (Chronbach's $\alpha = .766$) and traditional bully scale (Chronbach's $\alpha = .714$) consisted of four questions each. The depression scale (Chronbach's $\alpha = .837$) consisted of seven questions.

At the end of the questionnaire the participants were asked if they understood the questions and if they needed help with the questions. Around 92.0% answered that they understood most or all of the questions (N=1957). 43.0% didn't need any help with the questions (N=1953). 29.0% only needed help with one question and 25.5% needed help with several questions.

The IBM SPSS Statistics software was used to execute descriptive statistics and bivariate correlation.

Procedure

Parents were informed of the study, prior to the questionnaire administration, through passive consent form.

The questionnaire was administered in February 2013 to all children in grades five through seven in Iceland present at the time of administration. Teachers were responsible for the administration to their class.

The students were informed that it was not a test and they were not obligated to answer the questions. They were also informed that no one familiar to them would ever see their answers or be informed about what they answered. They were let known that this was anonymous study and asked not to write their name on the questionnaire or the envelope they were to put the questionnaire in after answering it. If they had any questions about the questionnaire they were asked to close their questionnaire and raise their hand and the teacher would come with an unanswered questionnaire to help without seeing their answers. When finished, they were to seal the envelope and turn it in to the teacher.

The Data Protection Authority were informed of the study but since the data weren't traceable to the person they didn't fall under the law number 77/2000 of protection of privacy and processing of personal data.

After the answers had been filed the questionnaires were destroyed.

Results

Prevalence of bullying

The answers to the questions about having been a victim of cyber bullying are shown in table 1. Between 0.5% and 1.4% (N = 1945-1961) answered the questions concerning cyber bullying with *sometimes* or *often*. More participants had *sometimes* or *often* been teased online (1.3%) and received ugly messages online (1.4%) than being teased through text message (0.5%) and received ugly messages e.g. text message (0.7%).

Table 1

Answers to victim of cyber bullying questions

Answers	Was teased through text message		Was teased online		Received ugly messages e.g. text message		Received ugly messages online	
	N	%	N	%	N	%	N	%
Never	1866	95.2	1788	91.9	1839	94.3	1785	91.7
Almost never	63	3.2	97	5.0	70	3.6	98	5.0
Seldom	22	1.1	35	1.8	28	1.4	37	1.9
Sometimes	6	0.3	20	1.0	9	0.5	18	0.9
Often	4	0.2	5	0.3	5	0.3	9	0.5
Total	1961	100	1945	100	1951	100	1947	100

Table 2 shows the answers to the questions about having been a victim of traditional bullying. Between 1.5% and 3.6% (N = 1945-1959) answered the questions concerning traditional bullying with *sometimes* or *often*. More participants answered *sometimes* or *often* having been teased alone by several kids (3.2%) and been left out by several kids (3.6%) than having been attacked and hurt by several kids (1.5%) and been in a group that several kids attacked (2.0%).

Table 2

Answers to victim of traditional bullying questions

Answers	Teased alone by several kids		Attacked and hurt by several kids		Several kids attacked a group they were with		Left out by several kids	
	N	%	N	%	N	%	N	%
Never	1605	81.9	1758	90.2	1705	87.7	1623	83.2
Almost never	222	11.3	119	6.1	147	7.6	211	10.8
Seldom	69	3.5	42	2.2	55	2.8	47	2.4
Sometimes	39	2.0	16	0.8	27	1.4	41	2.1
Often	24	1.2	13	0.7	11	0.6	29	1.5
Total	1959	100	1948	100	1945	100	1951	100

Table 3 shows the answers to the questions about having participated in traditional bullying. Between 0.4% and 1.8% (N=1953-1971) answered the questions concerning participating in traditional bullying with *sometimes* or *often*. More participants answered *sometimes* or *often* having been with several kids teasing one kid (1.2%) and been with several kids that attacked another group (1.8%) than having been with several kids hurting another kid (0.4) and been with several kids that left one kid out (0.6%).

Table 3

Answers to traditional bully questions

Answers	You were with several kids teasing one kid		You were with several kids hurting one kid		You were with several kids that attacked another group		You were with several kids that left one kid out	
	N	%	N	%	N	%	N	%
Never	1762	89.4	1883	96.4	1736	88.9	1791	91.8
Almost never	162	8.2	55	2.8	135	6.9	129	6.6
Seldom	24	1.2	9	0.5	46	2.4	19	1.0
Sometime	21	1.1	4	0.2	29	1.5	5	0.3
Often	2	0.1	3	0.2	7	0.4	7	0.4
Total	1971	100	1954	100	1953	100	1951	100

Table 4 shows the gender differences in answers to the questions about having been a victim of cyber bullying. Between 0.4% and 1.1% boys (N = 956-962) and 0.5% and 1.7%

girls (N = 963-972) answered the questions concerning cyber bullying with *sometimes* or

often. 0.4% boys and 0.5% girls had *sometimes* or *often* been teased through text message and

0.9% boys and 1.7% girls had *sometimes* or *often* been teased online. 0.5% boys and 0.8%

girls had *sometimes* or *often* received ugly messages e.g. text message and 1.1% boys and

1.6% girls had *sometimes* or *often* received ugly online messages e.g. in chat room.

Table 4

Gender differences in answers to victim of cyber bullying questions

	Was teased through text message				Was teased online				Received ugly messages e.g. text				Received ugly messages online			
	Boys		Girls		Boys		Girls		Boys		Girls		Boys		Girls	
Answers	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Never	925	96.2	916	94.2	880	92.1	885	91.9	918	95.9	898	92.8	888	92.8	875	90.6
Almost never	21	2.2	41	4.2	46	4.8	51	5.3	24	2.5	44	4.5	39	4.1	59	6.1
Seldom	12	1.2	10	1.0	21	2.2	11	1.1	10	1.0	18	1.9	19	2.0	17	1.8
Sometimes	4	0.4	1	0.1	8	0.8	12	1.2	4	0.4	4	0.4	8	0.8	9	0.9
Often	0	0.0	4	0.4	1	0.1	4	0.4	1	0.1	4	0.4	3	0.3	6	0.6
Total	962	100	972	100	956	100	963	100	957	100	968	100	957	100	966	100

Table 5 shows the gender difference in answers to the questions about having been a

victim of traditional bullying. Between 2.1% and 3.4% boys (N = 949-961) and 0.7% and

3.8% girls (N=970-972) answered the questions concerning traditional bullying with

sometimes or *often*. 3.0% boys and 3.2% girls had *sometimes* or *often* been teased alone by

several kids. 2.1% boys and 0.9% girls had *sometimes* or *often* been attacked and hurt by

several kids. 3.1% boys and 0.7% girls had *sometimes* or *often* been several kids attacked a

group they were with. 3.4% boys and 3.8% girls had *sometimes* or *often* been left out by

several kids.

Table 5
Gender differences in answers to victim of traditional bullying questions

Answers	Teased alone by several kids				Attacked and hurt by several kids				Several kids attacked a group they were with				Left out by several kids			
	Boys		Girls		Boys		Girls		Boys		Girls		Boys		Girls	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Never	766	79.7	821	84.6	822	86.5	914	94.0	792	83.5	893	92.1	801	84.1	803	82.6
Almost never	130	13.5	86	8.9	78	8.2	38	3.9	87	9.2	56	5.8	94	9.9	112	11.5
Seldom	36	3.7	32	3.3	30	3.2	11	1.1	41	4.3	14	1.4	26	2.7	20	2.1
Sometimes	18	1.9	19	2.0	12	1.3	4	0.4	21	2.2	4	0.4	20	2.1	21	2.2
Often	11	1.1	12	1.2	8	0.8	5	0.5	8	0.8	3	0.3	12	1.3	16	1.6
Total	961	100	970	100	950	100	972	100	949	100	970	100	953	100	972	100

Table 6 shows the gender difference in answers to the questions about participating in traditional bullying. Between 0.6% and 3.0% boys (N = 952-964) and 0.1% and 0.7% girls (N = 972-979) answered the questions about participation in traditional bullying with *sometimes* or *often*. 1.7% boys and 0.7% girls had *sometimes* or *often* been with several kids teasing one kid. 0.6% boys and 0.1% girls had *sometimes* or *often* been with several kids hurting one kid. 3.0% boys and 0.5% girls had *sometimes* or *often* been with several kids that attacked another group. 1.1% boys and 0.1% girls had *sometimes* or *often* been with several kids that left another kid out

Table 6
Gender differences in answers to traditional bully questions

Answers	You were with several kids teasing one kid				You were with several kids hurting one kid				You were with several kids that attacked another group				You were with several kids that left one kid out			
	Boys		Girls		Boys		Girls		Boys		Girls		Boys		Girls	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Never	825	85.6	911	93.1	900	94.4	958	98.3	795	83.2	920	94.7	865	90.9	904	92.9
Almost never	104	10.8	56	5.7	40	4.2	14	1.4	96	10.0	37	3.8	66	6.9	61	6.3
Seldom	19	2.0	5	0.5	7	0.7	2	0.2	36	3.8	10	1.0	11	1.2	7	0.7
Sometimes	15	1.6	6	0.6	4	0.4	0	0.0	24	2.5	4	0.4	5	0.5	0	0.0
Often	1	0.1	1	0.1	2	0.2	1	0.1	5	0.5	1	0.1	5	0.5	1	0.1
Total	964	100	979	100	953	100	975	100	956	100	972	100	952	100	973	100

Victim of bullying and depression

The hypothesis that victims of cyber bullying show more symptoms of depression than victims of traditional bullying was not supported. Even though there was significant correlation between victim of cyber bullying and depression ($r = .32$, p < .01) with 10.2% shared variability, it was not more than between victim of traditional bullying and depression ($r = .37$, p < .01) with shared variability of 14.0%.

Gender difference in victims of bullying and depression

There was significant correlation between cyber victim and depression for both boys ($r = .30$, p < .01) and girls ($r = .34$, p < .01). There was also significant correlation between traditional victim and depression among both boys ($r = .42$, p < .01) and girls ($r = .36$, p < .01). There was more shared variability between having been a victim of cyber bullying and depression among girls (11.4%) than boys (9.1%) but the shared variability between victim of traditional bullying and depression was more with boys (17.9%) than with girls (12.9%).

Discussion

The hypothesis that victims of cyber bullying show more symptoms of depression than victims of traditional bullying was not supported. Even though being a victim of cyber bullying explained 10.2% of depression symptoms it was less than for traditional bullying (14.0%).

Prevalence of cyber bullying (0.5%-1.4%) and traditional bullying (1.5%-3.6%) in this research was lower than other studies have shown (Schultze-Krumbholz & Scheithauer, 2009; Smith et al., 2008; Wang et al., 2011). But like the studies of Smith et al. (2008) and Wang, Nansel and Iannotti (2011) the trend is similar in the way of the prevalence of traditional bullying and is more than the prevalence of cyber bullying.

This study adds to the knowledge on cyber bullying in Iceland. It shows the prevalence rate of cyber bullying and traditional bullying. It also suggests that there is a

psychological impact of being victim of cyber bullying though it is not as much as it is for

being a victim of traditional bullying.

Limitation to this study is that the questions that were used to ask about cyber

bullying were not wide enough, it only asked about the Internet such as chat rooms and about

text messages but what needs to be done is to add questions concerning pictures, videos,

emails, webpages and other possible ways to cyber bully.

This indicates though that there is a need to study the psychological impact of cyber bullying

further.

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Appendix A

Questions 2 to 5 have ratings of *Never*, *Almost never*, *Seldom*, *Sometimes*, *Often*. Question 6 has the rating *No, I did not understand any question*, *I understood few questions*, *I understood several questions*, *I understood most of the questions*, *Yes, I understood all of the questions*. Question 7 has the rating *No, I didn't need help*, *I had help with one question*, *I had help with several questions*, *I had help with many questions*, *I had help with all or almost all of the questions*.

1. Are you a boy or girl?

2. How often this winter has this happened to you?

    a) Participated with several children in teasing a child

    b) Participated with several children hurting a child

    c) Participated with several children attacking another group

    d) Participated with several children in excluding a child

3. How often this winter has this happened to you?

    a) Been individually teased by several children

    b) Been attacked and hurt by several children

    c) Been in a group that was attacked by several children

    d) Been excluded by several children

4. How often this winter has this happened to you?

    a) Someone teased you through text message

    b) Someone teased you online, e.g. on a chat room

    c) Someone sent you ugly text message

    d) Someone sent you ugly message online, e.g. on a chat room

5. For the last seven days have you felt any of the following?

    a) You felt sad or had little interest in doing things

    b) You had little appetite

    c) You felt lonely

    d) You cried easily or wanted to cry

    e) You had sleeping problems

    f) Headache

    g) Stomach ache

6. Did you understand the questions in this questionnaire?

7. Did you need help from those that administered the questionnaire (e.g. teacher)?