



Do routine activities help predict young adults' online harassment: A multi-nation study

Criminology & Criminal Justice

1–15

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DOI: 10.1177/1748895816679866

crj.sagepub.com



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Abstract

This study examined the feasibility of routine activity theory in predicting online harassment victimization of people aged 15 to 30 years in the USA, Finland, Germany, and the UK. Logistic regression models controlled for socio-demographic factors, exposure to offender, target suitability, and absence of guardianship. According to the results, between 15 percent and 20 percent of respondents reported having been victims of online harassment. Of routine activity theory variables tested, only exposure to offenders was statistically significant in each of the four countries. Females were more likely to be victims than males in Finland, but not in other countries. Those with an immigrant background had a higher likelihood of being victims in Germany, but not

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in the other countries, whereas the protective role of guardianship was supported in the USA and Germany. Our findings indicate that while routine activity theory is a useful tool for predicting online victimization, its feasibility varied across countries.

Keywords

Internet, multi-nation study, online victimization, routine activity theory, youth

Introduction

Online victimization continues to receive a growing amount of research attention, with online harassment being among the most frequently studied aspects of this type of victimization (e.g. Jones et al., 2013; Näsi et al., 2014). Past research has indicated that younger users are more likely to experience different forms of online victimization compared to older users (e.g. Staksrud et al., 2013). It has been argued that this is a result of adolescents and young adults being both more able and more likely to use new technologies, thus spending more time online in general compared to older users (e.g. Livingstone and Helsper, 2010). As a result, negative online experiences have also become relatively common. Notably, research that focuses on these areas often relies on theoretical tools commonly used in the field of criminology. Routine activity theory (RAT), developed by Cohen and Felson (1979), is perhaps the most frequently applied of such tools. According to RAT, victimization is related to individuals' behavior, suitability of potential victims as a target, and social support structure, with crime occurring when these three intersect. Using these three primary risk characteristics as points of departure, we are keen to examine whether RAT helps to explain young adults' online harassment victimization in a multi-nation context.

Although the RAT approach has been a dominant theoretical framework in social science studies concerning risk factors of victimization in the offline context (Felson, 1987; Felson and Boba, 2010), recent years have seen a number of studies focusing on online victimization relying on RAT as their theoretical basis. Among these online topics have been, for example, internet fraud (Pratt et al., 2010), identity theft (Reyns, 2013), malware victimization (Bossler and Holt, 2009; Choi, 2008), cyberbullying (Navarro and Jasinski, 2012) and online sexual harassment (Holt et al., 2016; Marcum et al., 2010).

Online harassment is central to online risk, as it is the most common form of online victimization. As such, a growing body of work has begun to apply RAT to the context of online harassment (e.g. Marcum et al., 2010; Van Wilsem, 2013). However, Van Wilsem (2013) has raised the notion that the majority of past related studies have been based on small, non-representative data samples of college participants, therefore indicating the need for further research with sufficient data on factors influencing online harassment victimization. Even fewer studies have actually examined online victimization from a cross-national perspective. Many of the online victimization studies have focused merely on children and adolescents (e.g. Livingstone et al., 2011; see also Mitchell et al., 2016; Ybarra et al., 2011). Therefore, there is a need to expand research focus to include older age groups as well. For these purposes, this article aims to assess:

1. Whether routine activity theory helps to predict youth online harassment by using representative data on teenagers and young adults.
2. How well the theoretical framework provided by RAT helps to frame differences or similarities in a cross-national context among teenagers and young adults.

Our research therefore intends to provide valuable new information to further develop the research base of the popular RAT in the online environment while also adding a novel cross-national comparison through data collected from young adults in four countries, namely the USA, the UK, Germany, and Finland.

Routine Activity Theory and Online Victimization

The focus in past studies having to do with online victimization, such as online harassment, has generally been threefold; namely, to examine the commonality, implications, as well as factors explaining victimization. It has become evident from research that online harassment is an increasingly common problem that associates with a number of negative elements and behavior. A study by Jones and colleagues (2013) notes this growing trend throughout the 2000s, as online harassment victimization doubled in the United States over a period of 10 years (see also Livingstone et al., 2011; Näsi et al., 2015). It has also been established that victimization experiences associate with a number of negative experiences. For example, a study by Staude-Müller and colleagues (2012) found online victimization, such as online harassment, correlated with higher neuroticism and chronic stress, whereas Näsi and colleagues (2014) found an association between online harassment victimization and harmful online behavior, as well as lower subjective well-being. The focus of this article, however, is on the third aspect, namely the factors explaining such victimization.

Routine activity theory and online victimization

RAT is constructed on the basis of three core elements, the presence of a *motivated offender*, the existence of a *suitable target*, and the absence of a *capable guardian*. When these three elements coincide, increased opportunity for crime occurs (Cohen and Felson, 1979). As noted earlier, RAT is both designed for and commonly applied to the offline context, where its three key elements are more easily applicable when victims and aggressors converge within a shared time and space (Cohen and Felson, 1979). However, in recent years a growing number of studies have applied this theoretical framework in the online context where physical presence is not required for victimization to occur. This transition has prompted some criticism in terms of RAT's suitability for the online environment, with Yar (2005, 2013; see also Leukfeldt and Yar, 2016) arguing that the core elements of RAT are only partially applicable in the context of online victimization when using strict definitions provided by the theory.

Nonetheless, RAT has continued to be used in relation to studies on different forms of online victimization (e.g. Bossler et al., 2012; Holt et al., 2016; Leukfeldt and Yar, 2016; Marcum et al., 2010; Van Wilsem, 2013). Although existing research does mirror some of the aspects of Yar's earlier criticism, it also indicates that RAT does explain victimization

in the online context, at least partially. In particular, the aspect of guardianship has failed to be significant in explaining online victimization in any past studies (see also Reynolds et al., 2016), whereas variables reflecting visibility, or exposure of a suitable target, have served as significant variables in explaining online victimization through existing research (see, for example, Bossler et al., 2012; Holt et al., 2016; Reynolds, 2013). Some studies have also applied lifestyle exposure theory (Hindelang et al., 1978) in combination with RAT for the purpose of better examining online crimes. This approach has been termed as “cyberlifestyle-routine activities perspective” (see Reynolds et al., 2011). According to the theory, potential victimization is not necessarily confined to a particular physical place or time; rather, victimization can occur despite the lack of physical face-to-face contact (Reynolds et al., 2011).

It is evident that the prevalence of victimization online, combined with the relevance of RAT’s three components in past online victimization research, warrants more analysis and discussion concerning its applicability in predicting important phenomena. As such, we have designed our main independent variables to intersect within the victimization prerequisites of RAT, namely *exposure to offenders*, *target suitability*, and *absence of guardianships* to examine how well this type of framework serves as a theoretical measure for predicting online harassment victimization in a cross-national context.

Online victimization in a cross-national context

One of the main premises and strengths of this study is its cross-national comparison, allowing for a more comprehensive examination of the role of online harassment in a multi-nation context. Internet use is a relatively common activity in most western countries, yet the penetration statistics in the four included countries are not identical. Looking at the statistics regarding Internet use in the four countries used in this study, it appears that Finns have by far the highest Internet penetration percentage (97.1 percent). Whereas the USA (86.9 percent), Germany (88.6 percent), and the UK (89.8 percent) report relatively similar numbers (Internet World Stats, 2015). These user rates play a role in determining potential exposure to negative behavior online. In terms of past research on online victimization experiences in the online context involving the four countries in this study, relatively few comparative findings exist. However, more general statistics concerning online harassment and online victimization in general do exist.

According to a study by Jones and colleagues (2013), which compared online harassment victimization among American youth between 2000 and 2010, there was an upward trend in harassment statistics with roughly 11 percent of the respondents reporting online harassment by 2010. Work by Glüer and Lohaus (2015) examined online victimization among German teenagers. According to their findings, less than 3 percent of young Germans reported having been a victim of online bullying, whereas a study by Näsi and colleagues (2014) found that 17 percent of American and 19 percent of Finnish youth reported having been victimized by harassment online. In the wider online crime context, a study by Näsi and colleagues (2015) examined crime victimization in the online context among youth and young adults in the USA, the UK, Germany, and Finland. Their findings indicated that between 6 percent and 7 percent of young respondents in each of the four countries had been victims of cybercrime.

It therefore appears that online victimization is an increasing trend, particularly in relation to harassment experiences, yet past research also indicates notable country-level differences. As such, we are keen to examine in more detail how the premise of RAT applies in explaining online harassment victimization between the four studied countries.

Methods

Data

The comparable data of this study were collected from four western countries, namely the USA, Finland, Germany, and the UK from participants aged 15 to 30 years old. The data from the USA ($N = 1033$) and Finland ($N = 555$) was collected in spring of 2013 and data from the UK ($N = 999$) and Germany ($N = 978$) in the spring of 2014. The data are based on an online panel of Americans, Finns, Germans, and Brits who participated voluntarily in different research surveys. The data collection was administered by Survey Sampling International (SSI), and the potential participants were recruited using approaches including random digit dialing, banner ads, and other permission-based techniques, along with email invitations sent to a sample of panel members in the four countries for the purposes of stratifying the participant pool. The sample quotas were calculated to be nationally representative in terms of age, gender, and region for all four countries (for details, see Lorch, 2012; Näsi et al., 2014).

Dependent and independent variables

Our measure of online harassment is constructed based on the following question: “In your own opinion, have you been a target of harassment online, for example when people have spread private or groundless information about you or shared pictures of you without your permission?” with possible responses of either yes or no. This was measured as lifetime experience.

Our independent variables are structured on the three key elements of RAT: *exposure to offender*, *target suitability*, and *absence of guardianship*. A total of seven independent variables available in our data were selected for the analysis. These variables were selected in order to reflect the core elements of RAT in the online context for the purposes of a cross-national comparison of the applicability of the theory. Descriptive statistics for all independent variables by online harassment are given in the Appendix.

Exposure to offender. Our first variable is associated with victims’ potential exposure to motivated offenders. Here, we were interested in respondents’ social networking service (SNS) activities as a reflection of respondents’ potential exposure to possible offenders, as it has been commonly used in past research on online victimization (e.g. Mesch, 2009; Reyns et al., 2011). This activity was measured using two variables, SNS activity and number of Facebook friends (see Reyns et al., 2011). In order to measure our respondents’ social media activities, we created a variable by totaling the number of different social media services that respondents had used during the past three months. We had 21 different social media sites and services to choose from in the questionnaire. The

mean number of SNS sites used was as follows: Finland 6.32 (SD = 2.84), the USA 6.22 (SD = 3.14), Germany 5.60 (SD = 2.81), and the UK 6.27 (SD = 3.16). These sites and services included commonly used social media and social networking sites such as Facebook, YouTube, blogs, and discussion forums. Furthermore, respondents' numbers of Facebook friends were inquired by asking, "How many friends do you have on Facebook?" Responses were recorded as an exact number. This item offers a continuous variable in terms of the average number of Facebook friends, which was in Finland 254.99 (SD = 1207.16), the USA 334.32 (SD = 439.46), Germany 205.14 (SD = 216.83), and the UK 325.42 (SD = 408.06). Respondents without a Facebook profile simply marked 0 on the number of friends item.

Target suitability. In terms of variables associated with target suitability, we looked at respondents' family background. For this purpose, we asked respondents, "Was either of your parents born abroad?" with a yes or no response (the percentages of yes responses were 11.5 percent in Finland, 29.8 percent in the USA, 31.4 percent in Germany, and 27.9 percent in the UK). We also control for gender (male distribution in Finland was 50.1 percent, the USA 49.7 percent, Germany 49.8 percent, and the UK 50.9 percent) and respondents' average ages, which were 23.55 (SD = 4.14) in Finland, 24.05 (SD = 3.98) in the USA, 23.20 (SD = 3.97) in Germany, and 23.18 (SD = 4.13) in the UK. Prior research shows that being of an ethnic minority or immigrant background increases one's chances of victimization in the offline context (e.g. Button et al., 2012; Heiskanen, 2010; Peguero et al., 2015). Similarly, it has been found that females generally tend to be more likely victims of harassment than males in the offline context (McLaughlin et al., 2012). Younger users have been found to be both more active users of the Internet as well as more likely victims of negative online behavior (Staksrud et al., 2013). As a result, in relation to target suitability, we aim to compare online and offline dynamics in that variables of ethnicity, age, and gender may be more distinguishable in the offline context. Here, we take a look into whether they have a similar effect in the online context, despite the added dimension of lessened physical presence online through less face-to-face interaction. However, this does not mean that one's gender or ethnic background would not be evident for the offenders, as much online interaction is done using different social media profiles. In many cases of online victimization, both gender and ethnic background are involved in the reasons behind targeting, thus making for a suitable target.

Absence of guardianship. In terms of the variables associated with guardianship, we included variables that have been associated with being a type of protective buffer against victimization in past research (see, for example, Thornberg, 2011). This is also an aspect of RAT that has been commonly found to be less relevant in the online context (Holt and Bossler, 2008; Reyns et al., 2016). We relied on variables that reflect respondents' offline behavior to see whether they would transfer into an online context. First we looked at respondents' social activities. For this purpose we were interested in how often respondents met with their friends, family, or colleagues in social settings by asking, "How often do you meet face to face with friends, relatives or work colleagues for social reasons?" The options ranged from value 1 (never) to 7 (every day). The mean in Finland was 4.87 (SD = 1.57), the USA 4.55 (SD = 1.72), Germany 5.06 (SD = 1.46), and the UK 4.70 (SD = 1.66). Given that the frequencies were close to normal distribution for all samples, the variable is treated as continuous. The motive behind using this variable was that

respondents with less social activity tend to have less social support in general, and therefore could be less guarded by their network from outside interference. Lack of offline social contacts might also result in more active seeking of new, social contacts online, hence resulting in less guarded online behavior. In addition, we also enquired about respondents' living arrangements and whether they lived with their parents. The percentage of respondents who lived with their parents were 31.5 percent in Finland, 41.9 percent in the USA, 39.1 percent in Germany, and 45.1 percent in the UK. Here, we were interested in the idea that living with parents might provide a possible guarding effect, and whether such an effect becomes evident in the online context (see, for example, Mesch, 2009).

Analytic techniques

We apply logistic regression as our main analytic technique, conducting two types of explanatory models. We begin by examining whether there is a cross-country variation of online harassment (namely, whether respondents have been a target of online harassment). We then examine the effect of selected independent variables representing potential exposure, guardianship, and target suitability on the probability of being victimized in an online context. We are also interested in whether the impact of the independent variables is constant across the four countries.

We use regression coefficients (β) to compare the relative significance of the independent variables in the same models (standard errors in parentheses) in order to interpret the findings. In addition, chi-square (χ^2) log likelihood coefficients are presented for each model. However, since we are comparing the changes across different models, we also report marginal effects (in brackets) for all variables. Marginal effects provide reliable estimates because they take into account the size of the effect across all observations in the sample (e.g. Mood, 2010). Therefore, the statistics provide reliable predictions for the probability of being victimized at various values of the independent variables. Given that the size of this effect will differ across the values of the independent variables in the models, we report average marginal effects (AME).

Results

Online harassment victimization was relatively common across the four countries, although differences were also found. Table 1 shows percentages of those respondents who reported online harassment in the questionnaire. The table also shows the likelihoods of exposure to such material in terms of the AME coefficients.

In the Finnish sample, 19 percent of respondents reported having been victims of online harassment, while 17 percent of the Americans, 19 percent of Germans, and 15 percent of British respondents reported being victims. In terms of the estimated likelihood of being victimized, the adjusted predictions also vary considerably by country. The estimate coefficients are very close to the percentages displayed. Compared to the Finnish sample, the chances are over 4 percent lower in the UK sample, while the Americans show 2 percent lower percentages. However, the difference is only statistically significant between the UK and Finland ($p < .05$).

Table 1. Online harassment by country. Percentages (*N*), regression coefficients (β), standard errors (in parentheses), and average marginal effects [in brackets].

Harassed (yes)	% (<i>N</i>)	Coefficients
Finland	19.29 (103)	ref.
USA	16.79 (170)	-.157 (.138) [.023]
Germany	19.22 (188)	-.004 (.136) [.001]
UK	15.02 (150)	-.302 (.140)* [.043]
Total	17.39 (611)	
χ^2		7.731*
Log-likelihood		-1619.338

Note: * $p < .05$; ref: reference category.

The next step in the analysis was to examine whether various behavioral and socio-demographic dependent variables explain victimization in each country. Table 2 shows the final main-effect models by country. The first model shows the findings for the Finnish sample, the second for the American sample, and the third and fourth for the German and British samples, respectively.

The first observation is that SNS use is the only variable that is significant across the samples (at least $p < .05$ level). The effect of SNS use is weakest in the Finnish sample, where AME shows that when the value of the SNS activity variable increases by one unit the probability of online victimization increases by 0.2 percent. Furthermore, in other countries the AME coefficients show an approximate increase of 1 percent. While this finding appears to support our RAT assumptions, it is necessary to note that living with parents, gender, and age fail to remain statistically significant ($p < .05$) in some of the countries. This is especially true for gender, which is significant only in Finland. Females have nearly a 10 times higher chance of being harassed online in Finland when compared to males ($p < .05$). Living with parents, on the other hand, is significant in the American and German samples ($p < .01$). Those living with parents show diminished online victimization by approximately 8 percent in the American sample and 12 percent in the German sample. Age is significant in the American ($p < .01$), German, and British ($p < .05$) samples but not in Finland. In these countries, one year of age increases the risk of online harassment by about 1 percent.

In terms of the frequency of meeting friends and the number of Facebook friends, the findings are not definitive. Frequency of meeting friends seems to diminish the risk of online harassment, but the effect is not significant for any of the included countries. Similarly, although a high number of online friends slightly increases the risk of online harassment, the effect is insignificant across the samples. However, the Finnish sample shows a slight difference, in which the effect is close to significance ($p < .1$).

Finally, having an immigrant parent is significant only in the German sample ($p < .001$), and close to significant in the American sample ($p < .1$). An immigrant parent increases

Table 2. Logistic regression of online harassment in four countries. Regression coefficients (β), standard errors (in parentheses), and average marginal effects [in brackets].

Main effects	Finland	USA	Germany	UK
SNS use	.078 (.039)* [.002]	.098 (.026)*** [.013]	.80 (.027)** [.012]	.054 (.027)** [.011]
Immigrant parent	.314 (.339) (NS) [.050]	.497 (.173)† [.044]	.498 (.173)** [.079]	-.006 (.200) (NS) [-.001]
Age (years)	-.013 (.035) (NS) [-.001]	-.097 (.026)*** [-.013]	-.077 (.027)** [-.011]	-.054 (.027)* [-.007]
Gender (female)	.063 (.23)** [.095]	-.173 (.180) (NS) [-.023]	.006 (.173) (NS) [.001]	-.109 (.188) (NS) [-.013]
Facebook friends	.001 (.004)† [.000]	.000 (.000) (NS) [.000]	.000 (.000) (NS) [.000]	.000 (.000) (NS) [.000]
Meeting friends	-.070 (.075) (NS) [-.010]	-.072 (.051) (NS) [-.001]	-.049 (.058) (NS) [-.007]	-.005 (.058) (NS) [-.001]
Living with parents	-.205 (.314) (NS) [-.030]	-.580 (.209)** [-.077]	-.805 (.217)*** [-.115]	-.189 (.212) (NS) [-.023]
χ^2	17.662*	34.76***	32.698***	19.691**
Log-likelihood	-253.031	-438.877	-452.310	-412.701

Note: *** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .1$; (NS) = $p > .1$; SNS: social networking service.

online victimization by 8 percent in Germany and by 4 percent in the USA. In the UK and Finland no such effects were found. The shares of variables accounted for (Nagelkerke Pseudo R²) are moderate across the samples, varying between 7 and 10 percent.

Discussion

In this article we examined the suitability of routine activity theory (RAT) and its three key elements in predicting online harassment victimization in a multi-nation (the USA, Finland, Germany, and the UK) context. As such, this study represents the first application of this theory to online phenomena in a cross-national context. We had two main objectives for the analysis; first, to determine how well RAT explains experiences of victimization in the online context and second, whether online victimization associations were similar cross-nationally.

Our results indicate that online harassment experiences were relatively common in each of the four countries, with 15 to 20 percent of the respondents having been targeted. The risk of this type of victimization appeared highest in Finland and lowest in the UK.

We then examined the extent to which RAT and its three key elements, namely exposure to offenders, target suitability, and lack of guardianship, explain online victimization among young adults in the four studied countries. Results indicate that many of the independent variables failed to be significant in our regression analyses, therefore RAT was only partly supported through our determined variables and only in some of the four countries. Our findings therefore appear similar to most of the existing studies using RAT in relation to online victimization, where RAT characteristics built for the offline

setting are difficult to fully translate into variables for online study (e.g. Holt et al., 2016; Leukfeldt and Yar, 2016; Marcum et al., 2010; Van Wilsem, 2013). The use of SNS services was the only significant variable in all four countries, placing importance on the potential exposure to motivated offenders. The number of Facebook friends, however, did not carry any significance in any of the four countries.

In terms of target suitability, age was significant in all of the countries except Finland, indicating that younger users were significantly more at risk of victimization in three countries. This is in line with other studies involving online victimization, as younger users tend to be more active users of the Internet and social media, thus also being more at risk of negative experiences. In terms of gender, however, the results were the opposite, as only Finland reported significant results. According to recent statistics from a study by Duggan (2014), gender differences tend to become evident in the type of online harassment experienced, rather than in the likelihood of experiencing such victimization as a whole. In other words, females tend to be more common victims of sexual harassment, whereas males are usually more commonly victims of bullying or threats of physical violence (Duggan, 2014). This might also explain our largely non-significant distribution of harassment experiences in regards to gender. In terms of parents' immigrant background, the results were only significant in Germany. Although it has previously been found that immigrants are more likely to be victims of offline crime (e.g. Peguero et al., 2015), the effects seem less straightforward in the online context. There are very few studies that have examined the relationship between online victimization and immigrant background, thus warranting further research.

Offline social activity was not significant in any of the countries. Only living with parents appeared as a significant protective buffer, albeit only in the USA and Germany. The reason why living with parents serves as a protective buffer in some of these countries may relate to cultural differences in parenting when it comes to limits or guidance on the use of different SNS services and the Internet in general.

In terms of the cross-national comparison, our results suggest that the online context does not have a straightforward homogenizing effect when looking at the role of online harassment victimization in a multi-nation context. The country samples included in our comparison were all advanced information societies. However, exposure to motivated offenders was the only connecting factor throughout the different countries that was statistically significant. Yet, results that were not significant could also be noted here, along with gender and immigrant background, which were only significant in one of the four countries. Our findings therefore also bring forward the need for further comparative research on online victimization across cultural contexts.

RAT has been applied in a number of past studies associated with online victimization (e.g. Holt et al., 2016; Leukfeldt and Yar, 2016; Marcum et al., 2010; Reyns, 2013; Van Wilsem, 2013), with these studies finding RAT to be a partially suitable tool for explaining victimization in the online context. Our findings are therefore somewhat in line with the existing studies. In past online work, routine activities were not categorized strictly in terms of *exposure to offenders*, *target suitability*, and *absence of guardianships*. Thus, the suitability of RAT in the online contexts seems to be dependent on the type of variables associated with the core elements of RAT. The selection of different measures used in past RAT literature on online victimization is quite diverse, a trait shared with the

online environment. What this perhaps calls for is a more adaptable framework and measurements for applying RAT for different types of victimization in the online context rather than denying its applicability altogether. At the moment, the main problem with applying RAT online has to do with guardianship, which in the offline context is a more straightforward element. However, in the online context this guardianship premise is vague, where protecting elements can be less concrete. For instance, is it general experience in Internet use or sufficient parental supervision that most effectively guards against potentially dangerous online interactions? Or, do the safety and surveillance policies of different social media platforms serve as more effective guardianship in the online environment? Is there something else that can be seen to serve as an obvious guarding factor? These questions require further research. As such, criticism (Yar, 2005, 2013; see also Leukfeldt and Yar, 2016) and theoretical debate (see Pratt and Turanovic, 2016) regarding the applicability of the “full” RAT in online victimization should focus on questions of definition and the construction of variables that are more applicable in the online context.

This also links to the limitations of our study. Examining online harassment using the theoretical framework of RAT is not without problems, as our study was dependent on the variables that were available in the data collection. Future studies constructing variables that can be more effectively associated with RAT might yield different results. Data regarding prior victimization experiences could also serve as an informative variable in understanding current or future victimization. Despite having data for a multi-nation comparison, a wider cross-national comparison would provide an even more extensive topical understanding. Furthermore, although cross-national data were used here, the results only detected associations instead of causal relations. Finally, although the focus of this study was on young adults, a wider selection of age groups could provide interesting results in the future.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the Kone Foundation under Research Grant 2013–2015

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Appendix. Independent variables by online harassment in four countries. Percentages or means and number of valid cases or standard deviations (in parentheses).

	Finland		USA		Germany		UK	
	No	Yes	No	Yes	No	Yes	No	Yes
<i>Has been a target of harassment online</i>								
Yes	11.1 (48)	14.6 (15)	28.5 (237)	37.1 (63)	29.5 (233)	39.9 (75)	27.8 (236)	28.0 (42)
No	88.9 (383)	85.4 (88)	71.5 (595)	62.9 (107)	70.5 (557)	60.1 (113)	72.2 (613)	72.0 (108)
SNS use	6.20 (2.78)	6.88 (3.09)	6.10 (3.09)	7.06 (3.39)	5.48 (2.74)	6.10 (3.06)	6.12 (3.09)	7.13 (3.36)
Age (years)	23.70 (4.23)	23.58 (3.98)	24.29 (4.07)	23.29 (3.83)	23.29 (4.00)	22.82 (3.89)	23.33 (4.14)	22.34 (4.08)
<i>Gender</i>								
Male	52.9 (228)	37.9 (39)	48.8 (406)	54.7 (93)	49.6 (392)	51.5 (96)	50.1 (452)	56.0 (84)
Female	47.1 (203)	62.1 (64)	51.2 (426)	45.3 (77)	50.4 (398)	48.9 (92)	49.9 (424)	44.0 (66)
Facebook friends	192.55 (181.6)	251.56 (474.19)	327.97 (435.85)	362.19 (457.99)	200.68 (212.84)	233.46 (265.71)	315.74 (410.88)	378.68 (387.68)
Meeting friends	4.89 (1.57)	4.78 (1.59)	4.55 (1.72)	4.51 (1.75)	5.07 (1.44)	5.01 (1.57)	4.66 (1.65)	4.87 (1.67)
<i>Living with parents</i>								
Yes	81.9 (136)	18.1 (30)	84.1 (355)	15.9 (67)	84.2 (315)	15.8 (59)	84.4 (380)	15.6 (70)
No	80.2 (295)	19.8 (73)	82.2 (477)	17.8 (103)	78.6 (459)	21.4 (125)	85.4 (469)	14.6 (80)