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Trust and victimization: A cross-national comparison of Finland, the U.S., Germany and UK

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Abstract

This study examines the relationship between average means of generalized trust on two groups of social connections, namely people in general and people only met online, and respondents' past experiences with online and offline victimization. Our data was collected from four countries, Finland, the U.S., Germany and UK from participants aged 15–30 years. Each country was analyzed separately using OLS regression models. Our findings indicated that offline victimization had a negative association with perceived trust in people in general in all four countries. Online victimization was negatively associated with trust in people in general only in Finland and Germany. Trust towards people only met online was not as clearly associated with online and offline victimization, but in the U.S. and UK online victims reported higher trust. Gender, age, social activity, residence area and age also indicated country level differences in terms of their association with trust.

Keywords: trust, victimization, internet, cross-national, survey

Introduction

Trust serves as a key facilitator for social interaction, as well as the glue that holds existing social connections together (e.g., Freitag & Traunmüller, 2009; Wakefield & Poland, 2005). The relationship between trust and social interaction has received increasing attention from scholars, particularly since the 1980s (Lewis & Weigert, 1985; see also Molm, Takahashi, & Peterson, 2000). Thus it has become a highly influential, although not necessarily tangible, element of everyday communication whether between family members, colleagues, or business partners. According to Jones and George (1998), trust in an organizational setting is constructed from the 'interplay of people's values, attitudes, and moods and emotions' (Jones & George, 1998. p. 531; see also Lankton & McKnight, 2011). Furthermore, Sztompka (1999) argues that 'primary trustworthiness' results from elements such as trustees' performance and reputation. However, in a social context trust is commonly divided into two groups of trust, labeled as either particularized and generalized trust (Uslaner, 2002; Stolle, 2002), intimate and abstract trust (Freitag & Traunmüller, 2009) thin and thick trust (Putnam, 2000), knowledge-based trust or general trust (Yamagishi & Yamagishi, 1994). In essence, they each describe a division of trust between two types of social connections, those close to us (family, friends, colleagues) and those who are less familiar (people in general, strangers).

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In recent years, the growing importance of new information and communication technologies (ICTs) has provided even more aspects for trust-related research. The internet has become not only a powerful source of information and commercialism, but also an arena for social involvement and interaction. E-commerce (e.g., Chen, Wu, & Chang, 2013; Weisberg, Te'eni, & Arman, 2011), e-health and e-government (e.g., Beldad, De Jong, & Steehouder, 2010) have raised several questions concerning the role of trust in the use of such services, whereas different social media services and interactions (e.g., Facebook, Twitter, Instagram, discussion boards, etc.) also pose concerns over safety, privacy and trust. In this context new research phenomena, such as the online disinhibition effect, have also emerged (e.g., Suler, 2004), which is commonly associated with negative online behaviour, even to the extent of online hate speech. The influence of reliability, credibility and safety of online content on users' trust (Hargittai et al., 2010), along with trust and ICT use in general have indeed received increasing attention in trust-related research (Bekmeier-Feuerhahn & Eichenlaub, 2010; Chen et al., 2013; Lankton & McKnight, 2011; Valenzuela, Park, & Kee, 2009). Previous research has therefore shown that trust in the online environment is a multifaceted phenomenon relevant to a deeper understanding of the dynamics prevalent in the online environment (e.g Colesca, 2015; Giustiniano & Bolici, 2012; Thomas and Bostrom, 2010). Thus the relationship between trust and the new technology is becoming more and more important, in the context of business, government and personal relationships. In this study our aim is to examine the extent to which elements such as victimization are present in both online and offline contexts and influence the perceptions of trust.

Research objective

The key focus in this study is to better understand how victimization experiences both offline and online reflect on perceived trust in a cross-national context. The relationship between trust and victimization has received some attention in past research (e.g., Hawdon & Ryan, 2008; Jantzer, Hoover, & Narloch, 2006; Salmi, Smolej, & Kivivuori, 2007). However, the cross-national data of this study, along with the comparison between online and offline trust, provides a particularly unique research setting. The data was collected from four countries, namely the U.S., Finland, Germany and the UK. The decision to select these particular countries for the study was based on the intention of having cross-national data from four relatively different Western societies. Cross-national comparison also allows us to examine whether the internet serves as a kind of homogenous platform in the context of victimization (see e.g., Brundidge & Rice, 2009).

For the purposes of this study, trust was examined from the premise of generalized trust (Uslaner, 2002; Stolle, 2002). That is, we examined respondents' trust in people in general, both in a general sense, but also via its effects on trust in people only met online. What is meant by this is that although trust in people in general and people only met online do overlap to certain extent, they are treated here as two separate platforms of trust. Furthermore, trust was reflected in respondents' past victimization experiences both online and offline. So far there is relatively little research that has compared trust in regards to the online and offline context. The role of online trust has commonly been examined in the context of online retail (e.g., Bock et al., 2012) and online social interaction (e.g., Henderson & Gilding, 2004; Mesch, 2012), whereas offline trust research has a much more extensive history (e.g., Lewis & Weigert, 1985; Molm et al., 2000; Putnam, 2000). Therefore a more direct comparison between online and offline trust provides a relatively unique research setting. Besides just victimization, socio-demographic variables of gender, residential area, age and social activity were included in the analysis, providing supplemental information regarding the elements that can influence perceived trust.

Based on this, the key research questions for this study were to examine:

RQ1: How are online and offline victimization associated with perceived trust?

RQ2: Are there differences in the associations among the four countries?

Theoretical background

Trust and victimization

As noted earlier, trust in relation to victimization has received some attention in past research. In general, the association between the two has been examined through various past victimization experiences. The presence of crime, for instance, has been found to have a negative impact on institutional and authoritarian trust (e.g., Blanco, 2013; Hudson, 2006). On a more personal level, Janzer and colleagues (2006) found that past experiences of bullying are associated with lower levels of reported trust. Much like bullying, both sexual and non-sexual harassment have also been found to have a negative impact on trust (e.g., Hale, 1999; Vijayasiri, 2008). However, there are studies that have yielded results not in line with such findings. For instance, a recent panel study by Bauer (2014), which focused on the connection between perceived victimization and its effect on generalized trust, did not find a significant association between the two variables (see also Uslaner, 2002; Van Ingen & Bekkers, 2015).

In terms of the new ICTs, the internet in particular has an increasing role in trust-related research (e.g., Chen et al., 2013; Fogel & Nehmad, 2009). Many of the internet related risks are associated with the anonymity of communication and business interactions, as cyberbullying, online harassment and cybercrime have become increasingly common (Jones, Mitchell, & Finkelhor, 2013). As such, victimization today occurs both online as well as in the offline environment. This added social sphere motivates our examination of whether online and offline victimization have different implications regarding trust. That is, are victimization experiences in the offline setting more damaging in terms of one's trust than those experienced online. Furthermore, we are also interested in examining how influential such experiences are in a cross-national context and whether such victimization experiences are experienced differently in different countries.

Cross-national context

This study focuses on four countries, namely the U.S., Finland, Germany, and the UK. Linguistic differences between the four studied countries are evident; here, the related societal structures of these countries are also examined. For instance, in the U.S., the state tends to have a relatively minimal role in daily wellbeing, becoming involved in welfare provision only when the market, voluntary organizations, and the family fail to provide services (e.g., Gilbert & Parent, 2004). The U.S. is also by far the most populous of the four countries. Furthermore, it has the most diverse population with over 14 percent immigrants at the population level (United Nations, 2013). In terms of income differences, the U.S. reports the largest income gaps between population groups compared to the three other countries (OECD, 2014). From an ICT perspective, the U.S. records the third highest internet use statistics from the four countries (ITU, 2013).

Finland, as part of the Nordic welfare societies (e.g., Esping-Andersen, 1990; Greve, 2007), has a strong middle class and relatively modest income differences; in fact, income differences are smaller in Finland than in Europe on average (Gini index 25.8 in 2010) (Statistics Finland, 2013a; see also Inequality Watch, 2012). Its population is also relatively homogenous with only roughly 5 percent immigrants at athepopulation level (Statistics Finland, 2013b;United Nations, 2013). In Finland, the state also holds a strong position in the daily lives of the population, providing universal coverage of pensions, health insurance, occupational injury insurance, child allowance and parental leave.

Germany, on the other hand, is the second most populous country in Europe (after Russia). Although its immigrants percentage is roughly 12 percent, circa 20 percent of German nationals are of foreign descent (Destatis, 2011; United Nations, 2013). Germany has a strong middle class, but it also has greater inequality in terms of wealth compared to Finland (Inequality Watch, 2012). Germany is also a relatively conservative country, with somewhat lower state control compared to Finland.

The UK also has a diverse population with almost 13 percent immigrants (United Nations, 2013). In

terms of income inequality, the gap is smaller in the UK than it is in the U.S. but wider than in Germany and Finland, with almost twice as high income inequality measured in terms of the Gini coefficient compared to Finland (Inequality Watch, 2012). The UK is the most liberal of the three European countries with a stronger push for privatization, along with many of the social insurances and social benefits not being universal.

Furthermore, we were keen to examine whether respondents living in bigger cities, which tend to be more culturally diverse compared to smaller cities differed from respondents living in smaller towns or rural areas in the four countries plays a similar role. The U.S. has a population of over 300 million people, whereas Finland only has a population of 5.5 million people, being one of the least populated countries in Europe, alongside the other Nordic countries. This also affects population density, as Finland is one of the least densely populated countries in the world. Nearly every fifth Finn lives in the region surrounding Helsinki, the country's capital, with most of the immigrant population also living in this area. This means that a large majority of Finns live in less densely populated areas, with very little ethnic diversity. Despite its large population, the U.S. is not particularly densely populated, with Eastern and Western coastal regions being the most densely populated areas. Germany, as noted, is the second most populous country in Europe with a population of roughly 82 million. It has somewhat average population density, albeit Western Germany is much more densely populated than Eastern Germany. The UK has a population of close to 63 million and it is the most densely populated of the four studied countries. The most densely populated areas in the UK are the Greater London area, the Greater Manchester area and the Greater Glasgow-Edinburgh area. Thus it has densely populated areas both in the South, Central and North.

The reason ethnic diversity was highlighted in connection to trust relates to earlier findings showing that higher national levels of ethnic diversity has a negative impact on people's general social trust (e.g., Delhey & Newton, 2005; see also Lolle & Thorpe, 2011). In fact, past studies have shown that trust in the Nordic countries, such as in Finland, is generally higher than in the other Western European countries. Notably, these countries are also ethnically less diverse than most other European countries (Lolle & Thorpe, 2011). Therefore, this study is also keen to find out whether similar country level differences are present both in terms of offline and online trust.

Finally, in terms of victimization, according to when crime statistics in general the U.S. records higher crime statistics than the European countries. However, looking at the more detailed statistics, interesting cross-national differences appear. For instance, the U.S. records a much higher rate of homicides than the European countries, whereas statistics concerning assaults are much higher in all three European countries (e.g., Harrendorf, Heiskanen, & Malby, 2010; UNODC, 2014).

Data and methods

The data was collected from participants aged 15 to 30 years old in the U.S., Finland, Germany and the UK. The data from the U.S. (n=1000) and Finland (n=528) was collected in spring 2013 and data from the UK (n=999) and Germany (n=973) in spring 2014. Marginally few of the respondents did not answer all of the questions and they are treated as missing in the data. The participants were made up of a 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, as well as mirroring populations in all four countries in terms of basic socio-demographic measures of age, gender, education level, and income. The sample quota was calculated to be nationally representative in terms of age, gender and region for all of the countries (see also Näsi et al., 2014). Due to decreasing response rates in surveys, a quota sampling method in a cross-national context was seen as the best means of collecting cross-nationally comparable data.

Dependent measures

Respondents' trust in several social groups was measured first. Respondents were asked the general question: Would you say that the following people can be trusted, or that you can't be too careful in dealing with these people? Responses for each group ranged from 1–10, where 1 was 'you can't be too careful' and 10 was that the group 'can be fully trusted.' As noted, the focus was then placed on two particular groups of trustees. These two groups were 'people in general' and 'people only met online.' This allows an examination of how respondents perceive forms of generalized trust that is applicable both in the offline and online context.

Independent measures

To measure online victimization, respondents were asked about their experience of online harassment. For this purpose respondents were asked, 'In your own opinion, have you been a target of harassment online, for example where people have spread private or groundless information about you or shared pictures of you without your permission?' The responses to this item were yes or no (0=no, 1=yes). In order to measure offline harassment, respondents were asked, 'In the past three years, has someone bumped into you or touched you in a way that felt insulting to you?', with yes or no responses (0=no, 1=yes). Similar items regarding both online and offline victimization have been used in previous research (see e.g., Helweg-Larsen, Schütt, & Larsen, 2012; Wolak, Mitchell, & Finkelhor, 2007).

A number of factors known to reflect perceived trust were also controlled for, including respondents' gender (male and female), area of residence (large/medium size of city and small city/town), age and social activity (how often do you meet your friends, relatives or colleagues face to face for social occasions?). In terms of residence, large or medium size of city residents were those living in cities with more than 50,000 inhabitants and they were compared to those living in towns with fewer than 50,000 residents and rural area inhabitants. Social activity was measured on a 7-point scale (1=never and 7=every day). In the final models, we also used trust in people only met online (Table 2) and trust in people in general (Table 3) as independent control variables.

Analytic techniques

First, the mean score of respondents' levels of trust in people in general and people only met online in the four countries were analyzed. Then, a series of regression analyses were conducted to compare mean levels of trust, online and offline victimization, and the other independent variables within the two groups of social connections, namely people in general and people only met online. Each country was analyzed separately using linear ordinary least squared (OLS) models. On the basis of descriptive analysis, final models for each country in which the effects of all independent variables are adjusted were reported.

In the regression tables, unstandardized estimates (B) indicate the average level of trust on a scale from 1 to 10 for a one unit change of an independent variable. Standardized coefficients (β), on the other hand, report unit changes for each independent variable when scaled from 0 to 1. The standard errors (SE) are also reported for each unstandardized estimate. Statistical significances (p-values) are also indicated in the tables. In addition, variances accounted for (r^2 adjusted) are reported for all variables in the models.

Results

According to the descriptive results in Table 1, trust in people in general was much higher compared to trust in people only met online in each of the four countries. Trust in people in general was the highest in Finland and the lowest in Germany. Trust in people only met online was the highest in the UK and again

Table 1. Mean levels of trust in the four countries.

Country	People in general	People only met online
US	4.71 (2.39)	3.63 (2.51)
Finland	4.97 (2.25)	3.66 (2.28)
Germany	4.51 (2.21)	3.25 (2.24)
UK	4.75 (2.31)	3.74 (2.47)

Notes: Standard deviations in parantheses. Source: sample data.

the lowest in Germany.

In Table 2 the results from regression analysis regarding trust in people in general after controlling for the variables of online and offline victimization, along with the other independent variables were examined. In terms of online victimization, victims reporting lower trust compared to those who had not been victims and in Finland and Germany the coefficients were statistically significant. In terms of offline victimization, victims in all four countries reported significantly lower levels of trust compared to those who had not been victims. Females reported significantly lower trust in people in general compared to males in the U.S., Finland and the UK. Age was significant only in the UK, with older respondents being more trusting than younger respondents. Social activity was significant in all four countries, with those more socially active being more trusting in general than those less socially active. Perceived trust in people only met online was significant in all four countries, with respondents with higher online trust reporting higher trust in people in general. Residential area was not significant in any of the four countries. The variances accounted for indicated by adjusted R-squared statistics are relatively strong for each model (ranging from 22 to 37 percent).

In Table 3 the results from regression analysis regarding trust in people only met online after controlling for the variables of online and offline victimization, along with the other independent variables were examined. In the U.S. and the UK those who had been victims of online harassment actually reported higher level of trust compared to those who had not been victims. In terms of offline victimization, the effect was statistically significant only in the U.S with victims also reporting higher trust in people met online.

Females reported lower level of trust in people only met online compared to males in the U.S., Germany and the UK. In terms of age, the U.S. and Finland reported statistically significant results. In the U.S. older respondents reported higher trust, whereas in Finland it was younger respondent who reported higher trust in people only met online. Residence was significant only in Germany, where small city, town or rural residents reported lower trust compared to big city residents. Social activity was significant in all four countries and negatively associated with trust, meaning that those less socially active were more likely to report higher trust in people only met online compared to more socially active respondents. Finally, higher trust in people in general was also associated with higher trust in people only met online in all four countries. Explanation shares of online trust were strong, ranging from 29 to 47 percent.

Conclusions

This paper aimed to provide a new understanding regarding elements that influence trust. For this purpose, generalized trust in people in general and people only met online was examined in association with offline and online victimization, gender, age, residential area, social activity, along with also controlling for trust items in the analysis. A cross-national comparison of four countries – the U.S., Finland, Germany and the UK – allowed us to examine whether these associations were similar in the four countries.

In terms of comparing online and offline trust it must be noted that, in the four included countries, trust in people in general is at a much higher level than their trust in people only met online. Existing research

Table 2. Trust towards people in general. OLS regression models.

	US (n=1000)			Finland (n=528)			Germany (n=973)			UK (n=999)		
	B (SE)	*β*	*p*	B (SE)	*β*	*p*	B (SE)	*β*	*p*	B (SE)	*β*	*p*
Online victimization	-0.29 (.18)	-0.05	0.104	-0.05 (.23)	-0.09	0.034	-0.59 (.16)	-0.11	0.000	-0.08 (.17)	-0.01	0.652
Offline victimization	-0.51 (.15)	-0.10	0.001	-0.06 (.21)	-0.11	0.007	-0.35 (.13)	-0.08	0.007	-0.35 (.14)	-0.07	0.011
Female	-0.33 (.13)	-0.07	0.009	-0.41 (.18)	-0.09	0.023	-0.10 (.12)	-0.02	0.419	-0.25 (.12)	-0.06	0.038
Age	0.02 (.02)	0.03	0.309	-0.02 (.02)	-0.04	0.313	0.03 (.02)	0.05	0.055	0.03 (.02)	0.06	0.036
Small city residence	-0.018 (.10)	-0.05	0.074	0.12 (.14)	0.03	0.390	0.02 (.08)	0.01	0.842	-0.15 (.09)	-0.04	0.095
Social activity	0.17 (.04)	0.12	0.000	0.30 (.06)	0.21	0.000	0.17 (.04)	0.11	0.000	0.14 (.04)	0.10	0.000
Online trust	0.53 (.03)	0.55	0.000	0.34 (.04)	0.34	0.000	0.51 (.03)	0.52	0.001	0.55 (.02)	0.59	0.000
r^2 adj.	0.35			0.22			0.31			0.37		

Table 3. Trust towards people only met online. OLS regression models.

	US (n=1000)			Finland (n=528)			Germany (n=973)			UK (n=999)		
	B (SE)	*β*	*p*	B (SE)	*β*	*p*	B (SE)	*β*	*p*	B (SE)	*β*	*p*
Online victimization	0.52 (.19)	0.08	0.005	0.19 (.24)	0.03	0.427	0.025 (.16)	0.04	0.121	0.47 (.18)	0.07	0.010
Offline victimization	0.32 (.16)	0.06	0.040	-0.18 (.22)	-0.04	0.399	-0.05 (.13)	-0.01	0.694	0.28 (.15)	0.05	0.053
Female	-0.44 (.14)	-0.09	0.001	-0.28 (.19)	-0.06	0.137	-0.55 (.12)	-0.12	0.000	-0.38 (.13)	-0.08	0.003
Age	0.04 (.02)	0.07	0.016	-0.05 (.02)	-0.09	0.028	0.00 (.02)	0.00	0.980	0.02 (.02)	0.04	0.161
Small city residence	-0.12 (.10)	-0.03	0.239	-0.15 (.14)	-0.04	0.297	-0.19 (.08)	-0.07	0.016	-0.14 (.10)	-0.04	0.141
Social activity	-0.09 (.04)	-0.06	0.024	-0.20 (.06)	-0.14	0.001	-0.16 (.04)	-0.10	0.000	-0.09 (.04)	-0.06	0.017
Offline trust	0.59 (.03)	0.56	0.000	0.37 (.04)	0.37	0.000	0.53 (.03)	0.52	0.000	0.63 (.03)	0.59	0.000
r^2 adj.	0.45			0.29			0.39			0.47		

points out that this is likely to result from the lack of social cues often associated with online interaction, thus making such interaction less trustworthy (see e.g., Mesch, 2012; Nguyen, Bin, & Campbell, 2012). The results also show that the four countries are relatively different in terms of the associations between trust and the independent variables. Finns reported the highest level of trust in people in general, whereas British respondents were slightly more trusting in terms of people only met online than were Finns and Americans. In both cases the Germans were the least trusting of the four countries. Finns' high level of trust perhaps serves as a reflection of past findings showing higher levels of trust in Nordic countries (Lolle & Thorpe, 2011). It has also been noted that economically homogenous countries have been found to report higher levels of social trust (Delhey & Newton, 2005), whereas higher levels of immigration have been found to have an opposite effect, particularly in cases where economic and institutional inequality is greater (Kesler & Bloemraad, 2010). Yet in this study, Germans recorded the lowest level of trust, even though both the U.S. and the UK have much higher immigrant proportions and greater economic inequality. However, earlier studies have found that Germans in general record very low levels of trust in their government, along with low levels of interpersonal trust (see e.g., Donovan, Denemark, & Bowler, 2008). Thus our results reinforce past research findings in these areas.

Looking at trust in both people in general and people only met online through victimization experiences, it is possible to witness some interesting cross-national differences. For instance, online victimization had a negative association with trust in people in general in both Finland and Germany, whereas in the case of trust in people only met online, the results were significant in the U.S. and the UK instead. However, interestingly, American and British online victims actually reported slightly higher levels of trust on people they had only met online than non-victims did. This may in part result from the fact that online victims also tend to be more active online users (e.g., Reyns, 2013). The more active internet users may also be more likely to engage with people only in the online context, thus resulting in a generally more trusting attitudes towards online acquaintances. In terms of offline victimization the results were more traditional, as in all four countries trust in people in general was weakened by such victimization experiences. However, in terms of trust in people only met online, only the U.S. had a statistically significant result.

Our results therefore indicate that offline victimization has a more negative association with perceived trust, particularly in people in general, than online victimization when comparing all four countries. However, the implications from negative experiences appear much less straightforward when it comes to the online context. Thus our findings are somewhat in line with the mixed findings from past research concerning the relationship between trust and victimization in the more traditional context (e.g., Bauer, 2014; Jantzer et al., 2006). It however needs to be acknowledged that in future research it would be beneficial to design trust items that address online trust in particular, thus allowing measures of causality in the context of online trust and the elements that influence it.

In terms of trust and the other independent variables, gender appeared to be a relatively stable factor in both offline and online trust. Males were more trusting than females throughout, supporting previous findings concerning gender differences related to trust (e.g., Byrnes, Miller, & Schafer, 1999; Charness & Gneezy, 2012; Harris, Jenkins, & Glaser, 2006).

Age presented some cross-national differences. In terms of trust in people in general the results were only significant in the UK, where the older respondents were more trusting compared to younger respondents. In terms of trust in people only met online the results were significant in the U.S. and Finland. However, in the U.S. older respondents reported higher levels of trust than did younger respondents, whereas in Finland the results were the opposite. It would indicate that in the U.S. and the UK getting older and gaining more experiences in life also increases levels of generalized trust, whereas in Finland young people set out as more trusting but with age lose some of their perceived trust. Residence and whether respondents were living in bigger or smaller cities did not play a significant role with regard to trust. Only Germans living in larger cities reported higher trust in people only met online compared to those living in smaller cities.

Active face-to-face social life had a positive association with trust in people in general. However, the association was negative in terms of trust in people only met online, meaning that less socially active people were more likely to report higher trust in all four countries. It may be that those socially less active in the offline context are more active online, thus resulting in higher trust in online context.

Finally, we also controlled for trust in people only met online in association with respondents' trust in people in general, and vice versa, controlling for trust in people in general in association with respondents perceived trust in people only met online. It appears that higher levels of trust in people in general and people only met online also carries over to both online and offline context.

Research limitations

It should be pointed out that our research has its limitations. One of the central challenges that needs to be acknowledged here is the fact that the premise of trust in people in general and trust in people only met online does not provide straightforward comparison of the online and offline context, as both types of trust can be viewed as forms of generalized trust. Furthermore, the two measures of harassment victimization, in the online and offline context are not directly comparable, thus this might also have an effect on the results. In terms of other limitations, cross-sectional data only serves as an indication of one particular time period, thus providing limited tools to examine causality and change. Furthermore, survey panels are a relatively new way of collecting data, although they are becoming increasingly popular. Furthermore, the potential for volunteer bias must be noted when interpreting our findings. Earlier related studies have generally focused on teenagers and young adults (e.g., Livingstone et al., 2011), and this study is also limited to those aged between 15 to 30 years old. Thus, future studies are encouraged to examine these questions from the perspective of older age groups as well.

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Appendix table 1: Descriptive statistics of the variable percentages (means in parentheses).

	US		Finland		Germany		UK	
	n	%	n	%	n	%	n	%
Being targeted online								
Yes	169	16.9	102	19.3	187	19.2	140	15.0
No	831	83.1	426	80.7	786	80.8	849	85.0
Being targeted offline								
Yes	274	27.4	145	27.5	343	35.3	281	28.1
No	726	72.6	383	72.5	630	64.8	718	71.9
Gender								
Male	498	49.8	262	49.6	484	49.7	509	51.0
Female	502	50.2	266	50.4	489	50.3	490	49.0
Residence								
Large/medium sized city	572	55.4	282	51.3	459	46.9	538	53.9
Small city/town	461	44.6	268	48.7	519	53.1	461	46.1
Age (mean age)	1000	(23.12)	528	(22.67)	973	(23.21)	999	(23.18)
Social activity (mean)	1000	(4.55)	528	(4.87)	973	(5.06)	999	(4.69)
Total	1000	100	528	100	973	100	999	100