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"DNT LET 'EM H8 U!": Applying the Routine Activity Framework to Understand Cyberhate Victimization Among Adolescents Across Eight Countries

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ABSTRACT

Recent evidence shows that adolescents across the globe are increasingly encountering hateful material on the Internet. However, the factors that lead adolescents to fall victim to cyberhate are still not well understood. To address this gap in the literature and assist media education campaigns in developing theoretically-grounded prevention programs, the present study utilizes Routine Activity Theory to investigate whether witnessing cyberhate (exposure to motivated offenders), parental mediation of Internet use (capable guardianship), and adolescents' online disclosure of private information (target suitability) predict cyberhate victimization among adolescents. Participants consisted of 6,829 adolescents ranging in age from 12 to 18 (M_{age} = 14.93; *SD* = 1.64) from Cyprus, Germany, Greece, India, South Korea, Spain, Thailand, and the United States. Results showed that witnessing cyberhate was positively correlated with cyberhate victimization. Further, instructive parental mediation was negatively associated with cyberhate victimization, while restrictive parental mediation demonstrated the opposite effect, suggesting that the form of parental mediation matters when attempting to reduce adolescents' risk for cyberhate victimization. Finally, online disclosure was positively associated with cyberhate victimization. Consequently, the present investigation confirms the usefulness of applying Routine Activity Theory to cyberhate victimization. Furthermore, the findings highlight the need for effective prevention programs. Based on the findings of this study, media education training that equips adolescents with the skills they need to manage cyberhate experiences, increase their critical attitudes about private information they share online, and inform parents to use effective mediation strategies to diminish dangers associated with cyberhate is suggested.

Keywords: cyberhate, hate speech, parental mediation, online disclosure, cybervictimization

"DNT LET 'EM H8 U!": Applying the Routine Activity Framework to Understand Cyberhate Victimization Among Adolescents Across Eight Countries

1. Introduction

Today, information and communication technologies (ICT) are an integral part of adolescents' daily life. Adolescents use ICT for online communication online, entertainment, relationship building, and information gathering (Feierabend et al., 2018). The downside of growing up in a world equipped with a wide range of ICT is that, in addition to other risks, the online world offers a host of fake news, conspiracy theories, hate groups, and hateful online content. The latter is often referred to as cyberhate (also known as hate speech). Cyberhate can be defined as offensive, insulting, or threatening texts or speech, videos, and pictures against people based on sexual orientation, disability, ethnicity, religion, or other group characteristics. Cyberhate seeks to intentionally harm and devalue individuals and advocate hatred, hostility, or violence towards them (Blaya, 2019; Wachs et al., 2020; Wachs & Wright, 2018). Recent findings indicate that adolescents often come across hateful content on the Internet; religious- and ethnic-related cyberhate are the most common forms of cyberhate (Reichelmann et al., 2020; UK Safer Internet Centre, 2016). Therefore, the present study focuses on these forms of cyberhate.

While the literature on cyberhate is growing, little is known about theoretical frameworks that help to understand why adolescents may fall victim to cyberhate exposure. Such knowledge, however, is needed to inform parents/educators and teachers and develop theory-driven media education prevention programs that can be implemented in schools. To address this gap in the literature, the present study applies the Routine Activity Theory (Cohen & Felson, 1979) as a theoretical framework to understand cyberhate victimization by taking into account victims' exposure to motivated offenders (witnessing cyberhate), capable guardianship (parental mediation strategies of Internet use), and target suitability (adolescents' online disclosure of private information).

1.1. Understanding the Relevance of Cyberhate for Adolescents

Several arguments can be made for why studying cyberhate is relevant for adolescents. First, recent findings indicate that adolescents across the globe are frequently exposed to cyberhate. A cross-national study among adolescents in Europe, North America, and Asia found that across the eight participating countries, 49% had witnessed cyberhate at least once within the last 12 months (Wachs et al., 2019). The same study revealed differences in frequency rates of exposure by country with the lowest frequency rate for witnessing cyberhate in India (31%) and the highest exposure in Spain (68.5%). There are also some indications that the amount of hate material on the Internet is rapidly increasing, and that adolescents' exposure to hateful online material and websites is increasing as well (Hawdon et al., 2019)

Second, organized hate groups and individuals actively target youth online for recruitment. Indeed, members of hate groups are not only acutely aware of the increasing amount of time young people are spending online, but also the malleability of their worldviews that make them especially susceptible to hateful ideas (Costello et al., 2018). Cyberhate-merchants often utilize foot-in-the-door techniques to initially gain access to impressionable adolescents, introducing them to the universe of hate slowly, often innocuously. To maximize their success, they also create online content that is oriented visually and adapted to youth cultural styles. With the use of music videos, online games, sardonic memes, and homework aides (Tynes, 2006), purveyors of hate can introduce harmful material unbeknownst to their targets. This allows for subliminal forms of indoctrination and, in extreme cases, radicalization (Smith, 2009).

Third, political identities develop during adolescence, a time when adolescents learn to become informed citizens (Fend, 1991). Currently, adolescents use ICT to perform this developmental task by gathering information on political processes, enabling self-expression, and organizing in groups (Kim & Yang, 2016). They also search online for groups that will

give them a sense of (political) identity. Hate groups offer a clear and uncomplicated ideology, and acceptance and approval, which adolescents may be lacking elsewhere (Bauman et al., in press). Adolescents, who are in the stage of developing critical thinking and sociopolitical interests, might be suitable targets and easier to manipulate compared to adults. Particularly, anti-democratic, xenophobic, and right- or left-wing extremist movements in the online and offline worlds are problematic to adolescents' identity development and their political socialization (Manzoni et al., 2019). The significance of political socialization during adolescence is also supported by longitudinal studies that showed that political attitudes during adolescence are related to later political attitudes in adulthood (Grob, 2009).

Finally, the impact of cyberhate on adolescents' wellbeing and psychological health is concerning. Recent findings suggest that an increase in cyberhate leads to more crimes against minorities in the offline world (Williams et al., 2019), is related to negative feelings (e.g., anger, shame, sadness) (Reichelmann et al., 2020; UK Safer Internet, 2016), lowers trust in people (Näsi et al., 2015), and increases outgroup prejudice via lower sensitivity to cyberhate (Soral et al., 2018). Also, related research on online and offline discrimination reveals that experiencing discrimination is associated with more externalizing and internalizing problems and a lower sense of connectedness and belonging to societal institutions, such as schools (Roche & Kuperminc, 2012; Sinclair et al., 2012; Tynes et al., 2008; Wright & Wachs, 2019).

1.2. A Routine Activity Theory Framework to Cyberhate Victimization

Routine Activity Theory (RAT), one of the most commonly utilized theories in the criminological research literature, takes an ecological approach to explain victimization. RAT asserts that the likelihood of criminality increases at the confluence of a motivated offender, a suitable target, and a lack of capable guardianship (Cohen & Felson, 1979). The commonplace habits, or "routine activities," of individuals influence the likelihood these three elements will converge in time and space.

RAT was originally developed to explain victimization in the physical world; however, recent scholarships demonstrate the efficacy of utilizing a modified version of RAT (e.g., Eck & Clarke, 2003; Reyns et al., 2011) to enhance the understanding of various forms of cybervictimization, including fraud, identity theft, harassment, cybergrooming, and exposure to – as well as targeting by – cyberhate (e.g., Bossler & Holt, 2009; Bossler et al., 2012; Costello et al., 2017; Hawdon et al., 2019; Hawdon et al., 2015; Marcum et al., 2010; Navarro & Jasinski, 2012; Reyns et al, 2011; Wachs et al., 2020). There are nevertheless complications in applying RAT to cyber-activities since, unlike crime in the offline world, online offenders and victims often do not come into contact with one another in physical time and space. They do, however, converge in virtual space, and particular Internet users' cyber-routines can therefore affect the likelihood of victimization.

1.2.1. Exposure to a Potential Offender

Researchers have explored numerous online activities that can increase one's proximity to motivated offenders (e.g., Eck & Clarke, 2003; Reyns et al., 2011), heightening the potential for victimization. Indeed, using file-sharing programs, sending instant messages, and participating in chatrooms have all been found to increase the probability of being the victim of online harassment (Marcum, 2009; Navarro & Jasinski, 2012), while engaging in online banking and shopping render identity theft and online fraud victimization more likely (Holtfreter et al., 2008; van Wilsem, 2013). Spending more time online, using numerous social networking platforms, and maintaining expansive online networks likewise increase the odds of falling prey to various cyber-offenses (Bossler & Holt, 2009; Bossler et al., 2012; Costello et al., 2016; Hawdon et al., 2019; Hawdon et al., 2015).

In this study, we have operationalized exposure to potential cyberhate offenders as witnessing cyberhate. This aligns with recent work, which finds that individuals who visit hostile online sites, or virtual spaces containing mean or hateful material, are more likely to be victimized by cyberhate (Costello et al., 2017; Wachs & Wright, 2018; Wachs et al.,

2019). This finding also parallels the often-found association between exposure to deviance and victimization, both in online and offline settings (Bossler & Holt, 2009; Jennings et al., 2012; Wright & Wachs, 2018).

1.2.2. Capable Guardianship

Capable guardianship, or "the presence of a human element which acts – whether intentionally or not – to deter the would-be offender from committing a crime against an available target" (Hollis et al., 2013, p. 76), is shown to be largely effective at reducing victimization in offline settings (Pratt & Cullen, 2005). However, the ability of guardianship to reliably deter cyber-offenses is decidedly less clear (e.g., Bossler & Holt, 2009; Costello et al., 2016; Costello et al., 2017; Ngo & Paternoster, 2011; Reyns, 2015). In large part, this stems from the inherent difficulties of effectively policing a largely anonymous and theoretically limitless cyber-universe (Vakhitova et al., 2016).

A common approach to operationalizing online guardianship focuses on the deterrent effects of physical forms of protection, including firewalls, anti-virus programs, filtering, and blocking software (Fleming et al., 2006). Some studies explore whether offline social bonds, such as family and friendship circles (e.g., Reyns et al., 2016; Räsänen et al., 2016) dissuade cyber-deviance, while other research pays heed to protective qualities of informal systems of online social control, such as collective efficacy (Costello et al., 2017), that are more intentional than traditional notions of online guardianship. Taken together, these forms of guardianship demonstrate a limited ability to protect cybervictims. One form of guardianship which has not been investigated to date in the context of cyberhate is parental mediation of adolescents' Internet usage.

Parental mediation is the regulatory strategies parents use to monitor the online habits of their children, maximizing the Internet's benefits while diminishing associated dangers (Livingstone et al., 2017). Two types of mediation – restrictive and instructive – are often used by parents to inform their children's Internet experiences (Lee & Chae, 2012; Lwin et

al., 2008; Mesch, 2009; Navarro et al., 2013; Sasson & Mesch, 2014; Wright & Wachs, 2018). *Restrictive mediation* does not directly include children in the intervention process. Rather, it involves the curtailing of cyber-routines through blocking software or parental monitoring of children's online habits and associations. Shielding children from the dangers of the Internet is given primacy over educating them about such hazards (Mesch, 2009; Navarro et al., 2013; Sasson & Mesch, 2014; Wright & Wachs, 2018). *Instructive mediation*, on the other hand, explicitly involves children in the process of online monitoring. For instance, a parent adopting an instructive approach might appraise their children of the potential harms of certain online material, the appropriateness of sharing personal information online, and the latent danger of interacting with strangers on social media platforms. Instructive mediation also involves shepherding children to safe areas of the Internet (Arrizabalaga-Crespo et al., 2010; Livingstone et al., 2017; Sasson & Mesch, 2014; Wright & Wachs, 2018).

Numerous studies have investigated the ability of both restrictive and instructive mediation to reduce online victimization, producing varied results. For instance, there is evidence that both forms of mediation reduce cybervictimization, including cyberbullying (Alvarez-Garcia et al., 2019; Görzig & Machackova, 2016; Kirwil, 2009; Lee & Chae, 2012; Livingstone et al., 2017; Navarro et al., 2013). Other work, though, suggests that restrictive monitoring can increase the risk of adolescents engaging in risky online behavior (Navarro et al., 2013; Sasson & Mesch, 2014; Wright & Wachs, 2018), as well as reduce their digital literacy, rendering them more susceptible to cyber-attacks (Rodríguez-de-Dios et al., 2018; Wachs et al., 2020; Wright & Wachs, 2018). Also, work by Görzig and Machackova (2016) found that instructive mediation not only reduces cybervictimization but also instills more effective online coping mechanisms in adolescents, relative to children whose parents utilize restrictive mediation techniques. Thus, mediation that teaches children about the potential dangers of the Internet can also equip them to deal with such dangers, when and if they

materialize. To deepen our knowledge on the role of parental media education on adolescents' risk of cyberhate victimization, the present study examines the efficacy of both restrictive and instructive mediation in reducing victimization by cyberhate.

1.2.3. Suitable Target

A final component of RAT focuses on actions that render individuals more vulnerable to cybervictimization by increasing their target suitability (Cohen & Felson, 1979). Among them, speeding more time online (Keipi et al., 2017), communicating with strangers, clicking on unfamiliar links (Ngo & Paternoster, 2011), and illegally downloading software makes online users more attractive to cyber-offenders. Additionally, posting content on social media sites that can antagonize (Hawdon et al., 2019) or elicit jealousy (Finkelhor & Asdigian, 1996), sharing private information online (Bossler & Holt, 2009; Bossler et al., 2012; Navarro & Jasinski, 2012; Ngo & Paternoster, 2011; Reyns et al., 2011), sexting (Reyns et al., 2013), and confiding anonymously in others Internet users (Reyns et al., 2015) similarly increase target suitability. More overtly hostile online actions, such as engaging in cyberbullying, cyber harassment (Navarro et al., 2013), and hateful online attacks (Costello et al., 2017) are also linked to being victimized. These actions increase target suitability not only by raising one's online profile but also by potentially providing fodder for potential assailants.

In the present study, we measure target suitability as adolescents' online disclosure of private information. Online disclosure, or the penchant to share private information, such as names and intimate photos, differs amongst Internet users. The risks of sharing such information are myriad, though. In fact, online disclosure has been linked to a heightened risk of cyberbullying, sexual victimization, cybergrooming victimization, online harassment, phishing, hacking, malware infection, identify theft, and targeting by cyberhate (Costello et al., 2017; Kostić et al., 2016; Kupiainen et al., 2012; Mesch, 2009; Ngo & Paternoster, 2011; Reyns & Henson, 2016; Wachs et al., 2020).

1.3. Purposes of the Present Study

The present study aims to test RAT as a theoretical framework to understand cyberhate victimization by considering adolescents' exposure to motivated offenders (witnessing cyberhate), capable guardianship (parental mediation strategies of Internet use), and target suitability (adolescents' online disclosure of private information). Findings could be used to develop theory-driven prevention programs, which include educating adolescents about online safety and informing parents about effective mediation strategies. The study will test the following hypotheses:

Hypothesis 1 (H1): Witnessing cyberhate will be positively associated with cyberhate victimization (*exposure to an offender*);

Hypothesis 2 (H2): Instructive parental mediation will be negatively associated with cyberhate victimization based on ethnicity and religion, while restrictive mediation will be positively associated with cyberhate victimization based on ethnicity and religion (*capable guardianship*);

Hypothesis 3 (H3): Online disclosure will be positively associated with cyberhate victimization based on ethnicity and religion (*target suitability*).

2. Methods

2.1. Participants

In total, 6,829 adolescents between 12–18 years old (M_{age} = 14.93; *SD* = 1.64; females: 50.8%) from eight countries participated in the present study. By country, the study sample included 221 Cypriot participants (12–18 years; M_{age} = 14.49; *SD* = 1.48; females: 68%), 1,480 German participants (12–17 years; M_{age} = 14.21; *SD* = 1.23; females: 50.3%), 670 Greek participants (15–18 years; M_{age} = 16.49; *SD* = 1.12; females: 53.6%), 1,121 Indian participants (13–18 years; M_{age} = 15.37; *SD* = 1.48; females: 45%), 756 South Korean participants (12–17 years; M_{age} = 14.73; *SD* = 1.23; females: 49.8%), 1,018 Spanish participants (12–18 years; M_{age} = 14.29; *SD* = 1.64; females: 51.7%), 716 Thai participants (13–18 years; M_{age} = 15.68; *SD* = 1.70; females: 52.8%), and 847 American participants (12–

18 years; M_{age} = 14.79; *SD* = 1.80; females: 50.7%). Table 1 shows the distribution of participants by age, sex, and country.

-- INSERT TABLE 1 ABOUT HERE --

2.2. Measure

2.2.1. Ethnic- and religious-related cyberhate victimization

The questionnaire to measure cyberhate consisted of two parts; a definition of cyberhate and items to measure witnessing cyberhate and cyberhate victimization. The following definition of cyberhate was presented to the study participants first:

> "Cyberhate describes the usage of information and communication technologies (e.g. WhatsApp, Facebook, Instagram, Twitter) to offend and hurt somebody because of his or her race, gender, ethnic group, nationality, disability, sexual orientation, or religion. It can be either targeted directly at a person or group or generally shared online. Cyberhate can be offensive, mean, or threatening and can be expressed through degrading writings or speech online, such as posts, comments, text messages, videos, or pictures."

Then questions about cyberhate victimization were asked. Both kinds of cyberhate were measured with four items pertaining to cyberhate denigration, exclusion, and harassment due to ethnic background or religious affiliation (e.g., "How many times in the last twelve months did it happen that someone has cracked jokes online about you because of your race or ethnic group?"). All items are displayed in Table 3. All items were rated on a 5-point Likert scale of 0 (*never*) to 4 (*very frequently*). Cronbach's alphas were .82 for ethnic-related cyberhate victimization and .83 for religious-related cyberhate victimization. The results obtained in a confirmatory factor analysis (CFA) revealed a good model fit for ethnic group-related cyberhate victimization (CFI = .99; SRMR = 0.02; RMSEA = 0.09) and

religious-related cyberhate victimization (CFI = .99; SRMR = 0.01; RMSEA = 0.03), respectively.

2.2.2. Exposure to motivated offenders

Witnessing ethnic- and religious-related cyberhate was measured with the same four items used to gauge cyberhate victimization (e.g., "How many times in the last twelve months have you witnessed that someone has spread gossip or defamations online about another persons' race or ethnic group? or ...you have witnessed that someone has cracked jokes online about a persons' race or ethnic group?"). The items were rated on a 5-point Likert scale ranging from 0 (*never*) to 4 (*very frequently*). Cronbach's alphas were .73 for witnessing ethnic-related cyberhate and .71 for witnessing religious-related cyberhate.

The results obtained in the CFA revealed a good fit: CFI = .99; SRMR = 0.02; RMSEA = 0.05 for the witnessing ethnic-related cyberhate scale, and CFI = .99; SRMR = 0.01; RMSEA = 0.09 for the witnessing religious-related cyberhate scale.

2.2.3. Capable guardianship

The parental mediation of Internet use questionnaire asked adolescents how much they agree or disagree that their parents are involved in their Internet use (Arrizabalaga-Crespo et al., 2010). The questionnaire includes two subscales: instructive mediation (4 items; e.g., "My parents show me how to use the Internet and warn me about its risks") and restrictive mediation (4 items; e.g., "My parents check my Facebook, WhatsApp or other profiles on other networks"). All items were rated on a scale of 0 (*completely disagree*) to 4 (*completely agree*). Cronbach's alphas were .81 for instructive mediation and .78 for restrictive mediation. The results obtained in the CFA revealed a good model fit: CFI = .98; SRMR = 0.03; RMSEA = 0.05.

2.2.4. Target suitability

For the assessment of adolescents' private information disclosure, the following four items were used: "On the Internet, I make my locations public"; "…make my mobile phone

number public"; "…write my accurate home address"; and "…post my intimate photos" (Kostić et al., 2016). All items were rated on a scale of 0 (*never*) to 4 (*very frequently*). Cronbach's alpha was .84. The results obtained in the CFA revealed a good fit: CFI = .96; SRMR = 0.03; RMSEA = 0.08.

2.2.5. Covariates

Adolescents' age, sex (male versus female), and migration background (whether themselves, their mother or father were born in another country) were used as covariates.

2.3. Procedure

Approval to conduct this research was obtained from the Institutional Review Boards of the universities and/or educational authorities of the associated researchers. The Helsinki ethics protocol was followed for this study (World Medical Association, 2001). Data for this project were collected by first contacting school principals via emails or calls; the aims of the study, as well as how students could participate, were discussed. Upon securing approval from the school principals, classroom announcements about the study were made in the participating schools. Parental permission slips were sent home with adolescents to acquire consent for participation from the parent(s) or guardian(s). Data were collected at the adolescents' schools during regular school hours. In Cyprus, Greece, India, and Thailand data were collected using paper-pencil questionnaires and in Germany, South Korea, Spain, and the US data were collected using computer-assisted self-interviewing using the pc labs at schools. The research team followed the recommended process to translate the survey between various languages. This helped ensure that students in different countries were responding to the same set of questions and that the respective results were therefore comparable. The process included first translating the original instruments into the target language, and then translating it back by someone who had not seen the original questionnaires. Finally, the new translation was compared to the original instrument to ensure consistency (see Sousa & Rojjanasrirat, 2011).

2.4. Analyses

Frequency rates, descriptive statistics, and correlations were analyzed using SPSS 26.0. A structural equation model with witnessing ethnic- and religious-related cyberhate, perceived instructive and restrictive parental mediation, online disclosure of private information, and ethnic- and religious-related cyberhate victimization was conducted using *Mplus* 8.1 software (Muthén & Muthén, 2018). Before estimating the structural equation model, we examined the variance inflation factor (VIF) scores to check for multicollinearity. The tests indicated that multicollinearity was not an issue: Witnessing ethnic-related cyberhate (Tolerance = .673, VIF = 1.48), witnessing religious-related cyberhate (Tolerance = .538, VIF = 1.85), instructive parental mediation (Tolerance = .722, VIF = 1.38), restrictive parental mediation (Tolerance = .590, VIF = 1.69), and online disclosure (Tolerance = .665, VIF = 1.50).

Since both dependent variables were ordinal and not normally distributed, weighted least squares mean and variance-adjusted (WLSMV) estimation was used (see Bovaird & Koziol, 2012). WLSMV estimation has been shown to produce unbiased parameter estimates and standard errors with ordinal data (Flora & Curran, 2004). The goodness-of-fit was examined by considering the following indices: The Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). The quality of each model was evaluated using typical cut-off scores reflecting good and adequate fit of the data, respectively: CFI > .95 and .90; RMSEA < .06 and .08, and SRMR < .10 and .05 (Hu & Bentler, 1999). To account for the multilevel structure of the data (i.e., adolescents nested within countries) standard errors were corrected by using the complex design option in *Mplus* (Muthén & Muthén, 1998-2017).

Between 2.5% (*n* = 172; restrictive parental mediation of Internet use) and 1.3% (*n* = 86; witnessing religious-related cyberhate) of data were missing in the main study variables, 0.7% of data were missing in the sex variable, and 1% in the age variable. The Little's MCAR

test revealed that the data were not missing completely at random (χ^2 = 155.83 *df* = 89; *p* = .001), suggesting a pairwise or listwise deletion of missing data may lead to biased parameters and standard errors (Acock, 2005). Since simulation studies revealed that the full information maximum likelihood (FIML) estimation is robust when data were not missing completely at random (Johnson & Young, 2011), the FIML approach was used to address issues with missing data in this study. All statistical significance testing was performed at the .05 level.

3. Results

3.1. Descriptive Results

The frequency rates of cyberhate victimization in the overall sample are presented in Table 2. Frequency rates for ethnic-related cyberhate victimization varied by form between 17.9% and 12.1% and for religious-related cyberhate victimization between 18.1% and 10.7%. For adolescents who experienced cyberhate victimization, it happened mostly *very rarely* (between 10.5% and 6.6%) and only seldom *very frequently* (between 1.7% and 0.5%). For both, ethnic-related and religious-related cyberhate, the most common form of victimization was someone making jokes about the victims because of their religious affiliation or their ethnic group (18.1% and 17.9%, respectively). The least experienced form of cyberhate victimization was online exclusion due to ethnic background or religious affiliation (12.1% and 10.7%, respectively). Descriptive statistics of the scales are summarized in Table 3.

-- INSERT TABLE 2 & 3 ABOUT HERE –

Bivariate correlations between witnessing cyberhate, parental mediation of Internet use, online disclosure, and cyberhate victimization are presented in Table 4. As expected, higher levels of instructive parental mediation were associated with higher levels of restrictive parental mediation, lower levels of online disclosure, lower levels of ethnic-related cyberhate victimization, and lower levels of religious-related cyberhate victimization. Also, higher levels of restrictive parental mediation of Internet use were significantly related to higher

levels of online disclosure, higher levels of ethnic-related cyberhate victimization, and higher levels of religious-related cyberhate victimization. Furthermore, higher levels of online disclosure were significantly associated with higher levels of ethnic-related cyberhate victimization and higher levels of religious-related cyberhate victimization. Finally, higher levels of ethnic-related cyberhate victimization were significantly associated with higher levels of religious-related cyberhate victimization

-- INSERT TABLE 4 ABOUT HERE --

3.2. Associations between Witnessing Cyberhate, Parental Mediation of Internet Use, Online Disclosure, and Cyberhate Victimization

Figure 1 shows the results of empirically testing the associations between witnessing cyberhate (exposure to motivated offenders), parental mediation (capable guardianship), online disclosure (suitable target), and cyberhate victimization. The overall model fit was good (χ^2 = 2139.36 *df* = 415, $p < .001$, CFI = .98, RMSEA = 0.02, SRMR = 0.04), and the standardized factor loadings ranged from 0.54 to 0.86. The tested model explained 33% of the total variance in ethnic-related cyberhate victimization (R^2 = .327) and 50% of the total variance in religious-related cyberhate victimization (R^2 = .498). Witnessing ethnic-related cyberhate was positively associated with ethnic-related cyberhate victimization ($\hat{\beta}$ = 0.45, *SE* = .058, $p < .001$). Witnessing religious-related cyberhate was positively associated with religious-related cyberhate victimization ($\hat{\beta}$ = 0.56, *SE* = .087, $p < .001$). Instructive parental mediation had a negative association with ethnic-related cyberhate victimization ($\hat{\beta}$ = -0.13, *SE* = .030, $p < .001$), as well as a negative association with religious-related cyberhate victimization ($\hat{\beta}$ = -0.12, *SE* = .057, $p < .001$). Restrictive parental mediation had a positive association with ethnic-related cyberhate victimization ($\hat{\beta}$ = 0.17, *SE* = .040, $p < .001$) and a positive association with religious-related cyberhate victimization ($\hat{\beta}$ = 0.14, *SE* = .069, p = .040). Online disclosure had a positive association with ethnic-related cyberhate victimization

($\hat{\beta}$ = 0.24, *SE* = .033, $p < .001$) and a positive association with religious-related cyberhate victimization ($\hat{\beta}$ = 0.17, *SE* = .078, $p = .036$).

-- INSERT FIGURE 1 ABOUT HERE --

4. Discussion

Insults, threats, exclusion, and hostility towards minorities, and the advocacy of violence have all increased significantly on the Internet, especially social media, over the past several years (Hawdon et al., 2019). Adolescents – fervent social media users – are particularly at risk because they are frequently exposed to harmful cyber-contents, such as hate groups that are targeting adolescents online for recruitment. They are also undergoing the development of political identity and are more easily manipulated compared with adults (Costello et al., 2018; Manzoni et al., 2019). Also, exposure to cyberhate is often perceived as personally distressing and can impact adolescents' well-being and psychological functioning and increase prejudices (Reichelmann et al., 2020; Soral et al., 2018; Tynes et al., 2008; UK Safer Internet, 2016). And yet, not much is known from a theoretical perspective regarding why some adolescents become victims of cyberhate. More knowledge of cyber-victimization is needed to better inform parents/educators, teachers, and media pedagogues on how to protect adolescents from this emerging online risk. Doing so can further the development of theoretically-based media education prevention programs. The present study, therefore, sought to deepen the general understanding of factors that contribute to adolescents' cyberhate victimization experiences.

Overall, our study based on a sample of 6,829 adolescents from eight countries confirms the general premise of RAT and the usefulness of applying its approach to cyberhate victimization. As is evident from the results, the proposed model explained more variance of religious-related cyberhate victimization than ethnic-related cyberhate victimization, suggesting that the investigated variables are more useful to predict religious-related cyberhate than ethnic-related cyberhate victimization.

Per our first hypothesis, we found that witnessing cyberhate is associated with cyberhate victimization (*exposure to a potential offender*). This finding is in line with other works on cyberhate (Costello et al., 2017; Wachs & Wright, 2018) and related research on the associations between exposure to crime and deviance and victimization in online and offline settings (Bossler & Holt, 2009; Holtfreter et al., 2010; Jennings et al., 2012; Wright & Wachs, 2018). This result extends past research on cyberhate that showed an association between witnessing and committing cyberhate and cyberhate victimization and perpetration (Wachs et al., 2019; Wachs & Wright, 2018, 2019). While a direct association seems plausible according to RAT, follow-up research is needed to understand the underlying factors and mechanisms that explicate the relationship between witnessing cyberhate and cyberhate victimization (e.g., lack of productive coping strategies).

Consistent with our second hypothesis, strategies of parental mediation were associated with adolescents' risk for cyberhate victimization (*capable guardianship*). As expected, restrictive techniques, such as trying to limit the places adolescents can visit online, enforcing rules without discussions, or limiting children's Internet use, are not effective at deterring cyberhate victimization, while instructive techniques involving parents warning their children about online risks or establishing online rules with the input of their children are effective. We argue that parents who utilize instructive mediation are likely to discuss the use of ICT and the potential risks of doing so, which in turn might increase their children`s understanding of online risks and their willingness to internalize safety recommendations. On the other hand, restrictive parental mediation might have detrimental effects on adolescents' ability to deal with problematic online situations. They might also be perceived as a threat to their independence, which can increase their psychological reactance, motivational arousal that normally occurs when individuals feel their choices or range of alternatives are being restricted or taken away. For adolescents, psychological reactance can lead to negative psychosocial outcomes, such as increased risky online behaviors.

Our findings are inconsistent with some studies which found that both forms of parental mediation of Internet use reduce cybervictimization (Alvarez-Garcia et al., 2019; Görzig & Machackova, 2016; Lee & Chae, 2012; Livingstone et al., 2017; Navarro et al. 2013). However, consistent with other research, we found that restrictive mediation is positively associated, and instructive mediation is negatively associated, with adolescents' unwanted online experiences (Navarro et al., 2013; Sasson & Mesch, 2014; Wachs et al., 2020; Wright & Wachs, 2018). The finding that instructive mediation is negatively correlated with cyberhate victimization is also in line with other work on online risks that showed that restrictive mediation leads to reduced media literacy (Rodríguez-de-Dios et al., 2018) and instructive mediation positively influence adolescents' active coping strategies (Görzig & Machackova, 2016). However, more research is needed to understand whether instructive strategies of parental mediation might also be positively associated with adolescents' capability to cope with cyberhate. Taken together, our findings provide support for the assertion that the form of parental mediation matters when attempting to reduce adolescents' risk for cyberhate victimization.

As expected, we found support for our third hypothesis that online disclosure of private information will be positively associated with cyberhate victimization (*target suitability*). We propose that through disclosing private information online, some adolescents are more vulnerable when their target suitability is increased. This result is in line with past research that showed associations between online disclosure and various online risks (Costello et al., 2017; Kostić et al., 2016; Mesch, 2009; Kupiainen et al., 2012; Ngo & Paternoster, 2011; Reyns & Henson, 2016; Wachs et al., 2020). Future research might analyze whether the kind of private information adolescents discloses explains the risk for certain forms of cyberhate. A limitation of RAT is that it only considers target suitability (risk factors) but not 'unsuitability' (resilience factors). Hence, future work could investigate not only what makes

children more vulnerable (target suitability) to cyberhate victimization but also what makes them resilient after an attack.

4.1. Limitations

The present study offers key insights into previously unexplored correlates of cyberhate, such as parental mediation and online disclosure. It also provides an empirical test of the efficacy of using RAT to explain cyberhate victimization among adolescents. There are, however, a few limitations that warrant attention in future research. First, we only focused on two forms of cyberhate victimization, namely religious- and ethnic-related cyberhate. Although there is evidence that these are the most prevalent forms of cyberhate (Reichelmann et al., 2020; UK Safer Internet Centre, 2016), additional research on less common forms of cyberhate (e.g., ableism or homophobic cyberhate) can further our understanding of cyberhate victimization generally. Moreover, we did not differentiate within the categories of religion and ethnicity. It might be the case that, for example, members of a certain religion show a higher risk of cyberhate victimization than others (e.g., Muslims as compared to Christians), and thus, future research might include measures to allow this differentiation. Second, the cross-sectional study design and the use of mono-informant data limit our findings. The cross-sectional research design does not allow us to draw conclusions on the temporal ordering of the main study variables, namely witnessing cyberhate, parental mediation of Internet use, online disclosure, and cyberhate victimization. For example, parental mediation may have also been reactive; that is, for children who fall victim to cyberhate, parents may have applied restrictive mediation after the victimization occurred. Prospective longitudinal studies are needed to help understand the temporal ordering of the relationships tested in this study. Third, the present study relied exclusively on self-reports, making our results susceptible to self-report biases. Although cyberhate was defined for study participants, their responses could be subjectively biased nevertheless. Also, parental mediation strategies were measured using adolescents' reports. A multi-informant approach

combining adolescents' and parents' reports on parental strategies of Internet mediation could address this limitation. Fourth, the exact wording of the items for online disclosure is not directly linked with cyberhate experiences as some of the others may be (e.g., posting content on social media sites that can antagonize, posting political opinions). The significant findings suggest that the current measure may serve as a proxy for a composite of behaviors that may make children more vulnerable to victimization. Lastly, although our sample represents one of the first cross-national and large-scale samples on cyberhate among adolescents, it cannot be considered representative. Thus, follow-up research should consider using representative samples to increase the generalizability of the present study.

4.2. Practical implications

The present study offers practical implications for parents/educators, teachers, and adolescents. Since hateful online content is most prevalent on common social media sites (e.g., Facebook, Twitter, YouTube) and because most cyberhate exposure is accidental (Reichelmann et al., 2020), it is nearly impossible to protect adolescents entirely from cyberhate. Given that, it is critical to provide adolescents with the knowledge, skills, and confidence they need to cope with cyberhate. This is especially true since initial research suggests that bystanders generally lack effective coping strategies (i.e., technical and assertive coping) (Wachs et al., 2019). This may be particularly important as the relationship between witnessing and experiencing cyberhate was found to be rather strong. According to our findings, it is also imperative to raise awareness among adolescents regarding how to handle private information online and the potential risks that online disclosure of private information might entail.

Greater attention should also be given to the role parental mediation strategies of Internet use can play in helping to mitigate the risk of children falling victim to cyberhate. Our results suggest that parents tend to use instructive mediation strategies over-restrictive – and perhaps even avoid restrictive mediation altogether. In general, instructive mediation

includes communicating regularly with children about what they do online, encouraging them to talk about problems they experience, and jointly establishing rules regarding online behavior, all without being intrusive. Regarding cyberhate, utilizing instructive mediation strategies might also include discussions about free speech and hate speech, developing children's critical thinking skills so they can arrive at conclusions about online information by evaluating conflicting points-of-view, and considering the perspective of targeted groups. While parents should understand the risks the Internet poses for their children, they must be cognizant of the myriad opportunities and benefits the online world affords.

Considering that adolescents spend a great amount of time in school, educators and school administrators can play a significant role in cyberhate prevention efforts as well. Because schools are responsible for creating safe learning environments for their students, school personnel should consider conducting a threat assessment in response to incidents of cyberbullying and cyberhate. Whole-school policies regarding online risks and digital skills across the curriculum need to also include a discussion of cyberhate. Schools should allow adolescents an opportunity to understand the differences between free speech and hate speech, and biased, prejudiced information and factual, accurate information. Indeed, teaching students and educators to evaluate the legitimacy and credibility of online information is critical to combatting cyberhate. Increasing (ethical) media skills can help adolescents dissect cyberhate and offer an effective way of understanding other perspectives, consequently reducing prejudice. Schools should likewise teach the educators the perils posed by the Internet, including exposure to cyberhate, better enabling them to support their students' development into an informed citizen in a digitalized world.

4.3. Conclusions

This study represents the first attempt to comprehensively investigate ethnic- and religious-related cyberhate among adolescents in a cross-cultural sample from eight countries, utilizing a routine activity framework. Hence, this study has addressed gaps in the literature

by confirming the general assumptions of RAT and the usefulness of applying its approach to cyberhate victimization. To our knowledge, this study is also the first to investigate the associations between parental mediation and adolescents' cyberhate victimization. We have found significant associations between witnessing cyberhate, parental mediation, online disclosure, and cyberhate victimization. Results also suggest that the form of parental mediation matters when attempting to reduce adolescents' risk for cyberhate victimization. The findings of this research can be utilized to develop intervention and prevention programs by providing information about the types of educational programs that should be incorporated to protect adolescents from cyberhate victimization.

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Table 1

Frequencies by Age, Sex and Country (N = 6,722).

		Country																	
Age	Sex	Cyprus		German		Greece		India		South Korea		Spain		Thailand		USA		**Total**	
		n	%	*n*	%	*n*	%	*n*	%	*n*	%	*N*	%	*n*	%	*n*	%	*n*	%
12 – 15	Male	40	0.9	616	14.4	90	2.1	399	7.9	252	5.9	372	8.7	151	3.5	241	5.6	2101	31.3
	Female	115	2.7	625	14.6	83	1.9	294	6.9	290	6.8	387	9	162	3.8	231	5.4	2187	32.5
16 – 18	Male	29	1.2	120	4.9	216	8.9	278	11.4	127	5.2	119	4.9	182	7.5	140	5.8	1211	18
	Female	34	1.4	119	4.9	271	11.1	210	8.6	85	3.5	138	5.7	211	8.7	155	6.4	1223	18.2
Total		218	3.2	1480	22	660	9.8	1121	16.7	754	11.2	1016	15.1	706	10.5	767	11.4	6722	100

Table 2.

Frequency Rates of Cyberhate Victimization.

	Frequencies					
	Never	Very rarely	Occasionally	Frequently	Very frequently	
	%	%	%	%	%	*M* (*SD*)
Ethnic-related Cyberhate Victimization						
… someone has cracked jokes online about you because of your race or ethnic group?	82.1	10.5	4.7	1.7	1.0	0.29 (0.72)
…someone has spread gossip or defamations about you online because of your race or ethnic group?	84.2	9.7	3.9	1.2	1	0.25 (0.67)
…someone has sent you threats, defamations or other aggravating messages online because of your race or ethnic group?	87.1	7.8	3.5	1	0.6	0.20 (0.60)
…someone has excluded you from chats or online games, online groups because of your race or ethnic group online?	87.9	7.3	3.3	1	0.5	0.19 (0.58)
Religious-related Cyberhate Victimization						
…someone has cracked jokes online about you because of your religious affiliation?	81.9	8.1	5.6	2.9	1.7	0.35 (0.84)

…someone has spread gossip or defamations about you online because of your religious affiliation?	86.0	8.5	3.6	0.9	1	0.22 (0.64)
…someone has sent you threats, defamations or other aggravating messages online because of your religious affiliation?	87.8	6.9	3.5	1.1	0.7	0.20 (0.61)
…someone has excluded you online from chats or online games, online groups because of your religious affiliation?	89.3	6.6	2.7	0.9	0.5	0.17 (0.55)

Table 3

Descriptive Statistics of Witnessing Cyberhate, Parental Monitoring, Online Disclosure, and *Cyberhate Victimization.*

	Items	Min	Max	*M*	*SD*	Skew	Std. error	Kurtosis	Std. error
Witnessing Cyberhate									
Ethnic-related	4	0	4	0.64	0.01	1.56	0.03	1.97	0.06
Religious-related	4	0	4	0.63	0.01	1.63	0.03	1.91	0.06
Parental Mediation									
Instructive	4	0	4	2.24	1.11	-0.27	0.03	-0.84	0.06
Restrictive	4	0	4	1.45	1.11	0.42	0.03	-0.75	0.06
Online disclosure	4	0	4	1.05	1.07	1.02	0.03	0.05	0.06
Cyberhate victimization									
Ethnic-related	4	0	4	0.23	0.52	3.12	0.03	11.59	0.06
Religious-related	4	0	4	0.24	0.55	3.01	0.03	10.17	0.06

Table 4

Correlations among Witnessing Cyberhate, Perceived Parental Mediation of Internet Use, Online Disclosure, and Cyberhate Victimization.

Variables	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
1. Witnessing ethnic-related Cyberhate	–	.54	-.02	-.02	.08**	.37**	.29**
2. Witnessing religious-related Cyberhate		–	-.05**	.24**	.45**	.41**	.60**
3. Instructive mediation			–	.52**	-13**	-.11**	-.18*
4. Restrictive mediation				–	.43**	.16**	.27**
5. Online disclosure					–	.27**	.43**
6. Ethnic-related cyberhate victimization						–	.64**
7. Religious-related cyberhate victimization							–

* p <.05. ** p <.01.

Figure(s)

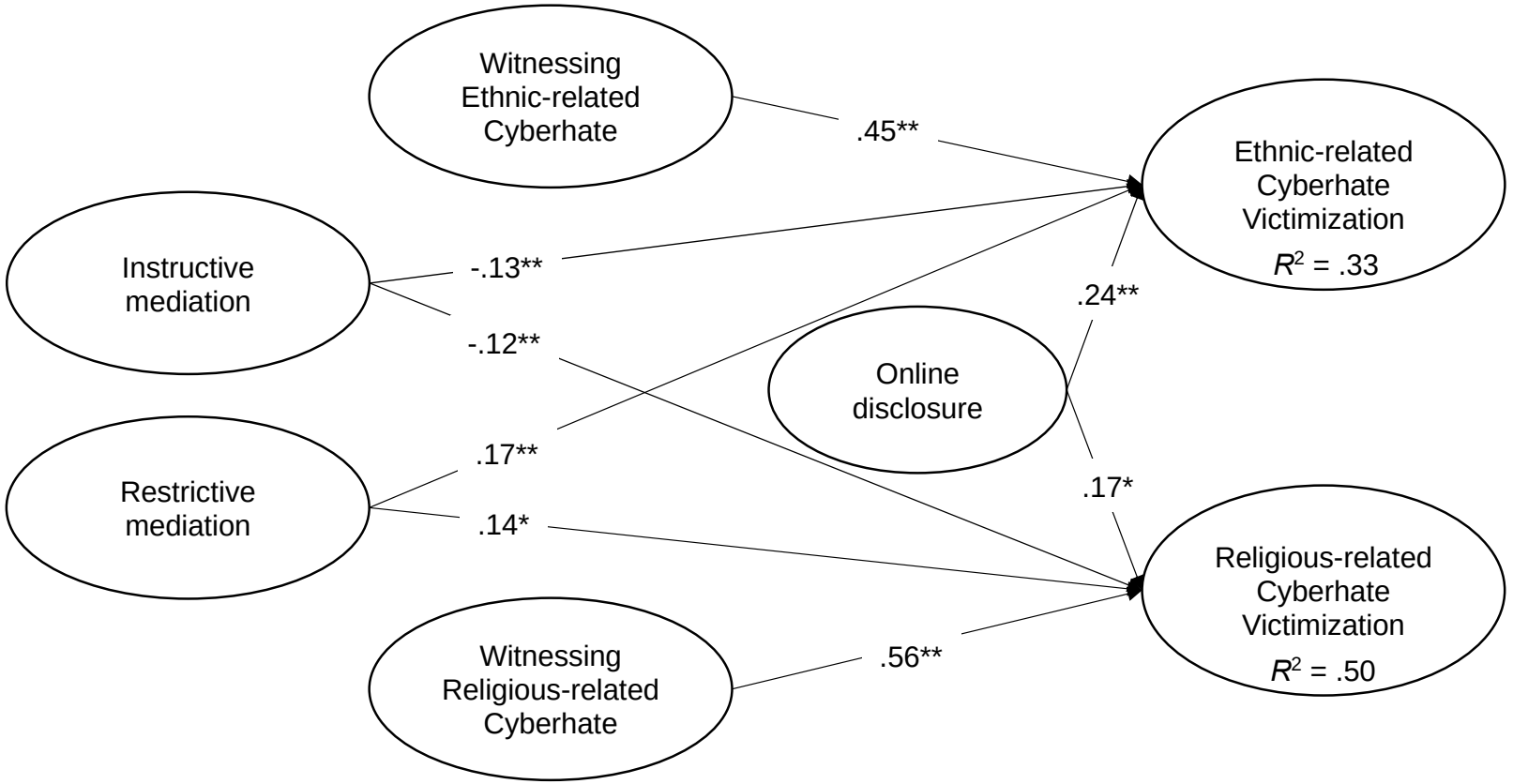

Figure 1. *Associations among Perceived Parental Mediation of Internet Use, Witnessing Cyberhate, Online Disclosure, and Cyberhate Victimization.*

Note. The model was controlled for adolescents' age, sex, and migration background.

- This study includes self-reports from 6,829 adolescents across eight countries.
- We investigated whether witnessing cyberhate, parental mediation, and online disclosure predict cyberhate victimization.
- Witnessing cyberhate and online disclosure was positively associated with cyberhate victimization.
- Instructive mediation was negatively related with cybervictimization and restrictive mediation showed the opposite effect.
- Practical implications for the development of media education programs that prevent cyberhate will be discussed.

Credit Author Statement

Sebastian Wachs: Conceptualization, Methodology, Data curation, Formal analysis, Writing - Original Draft, Writing - Review & Editing, Supervision, Project administration, Visualization, Investigation (Germany), Matthew Costello: Writing - Original Draft; Michelle F. Wright: Investigation (USA), Writing - Review & Editing, Katerina Flora: Investigation (Cyprus), Vassiliki Daskalou: Investigation (Greece), Evdoxia Maziridou: Investigation (Greece), Yeji Kwon: Investigation (South Korea), Eun-Yeong Na: Investigation (South Korea), Ruthaychonnee Sittichai: Investigation (Thailand), Ramakrishna Biswal: Investigation (India), Ritu Singh: Investigation (India), Carmen Almendros: Investigation (Spain), Manuel Gámez-Guadix: Investigation (Spain), Writing - Review & Editing, Anke Görzig: Writing - Review & Editing, Jun Sung Hong: Writing - Review & Editing.