



Cyberbullying in a Multicultural Context—Forms, Strain, and Coping Related to Ethnicity-Based Cybervictimization

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Cyberbullying is repeated aggression *via* digital media. There is extensive research analyzing forms of cyberbullying (e.g., relational or picture-based cyberbullying) and coping reactions (e.g., passive coping, seeking social support, retaliation). However, the mechanisms of cyberbullying in a multicultural society are not well-understood yet. Studies from the US show lower rates of cybervictimization for ethnic minorities, but comparable outcomes, studies from outside the US show different results. The present study focuses on the prevalence of ethnic/racist motives for cybervictimization as compared to non-ethnic/racist motives among adolescent students in a sample from Germany. Moreover, this study examines whether students with a migration background experience more strain and employ the same coping strategies as students without a migration background. An ethnically diverse sample of $N = 348$ adolescents, aged $M = 14.1$ ($SD = 1.2$) years, 50% males, completed a questionnaire about cyberbullying, perceived strain, motives for cybervictimization and coping behavior. Twenty-one percentage of the sample had no, 14% had a first-generation, and 66% had a second-generation migration background. Adolescents with a migration background generally reported higher levels of all victimization motives. No difference in perceived strain was found between the migration status groups. Ethnicity-based motives only significantly predicted ethnic/racist victimization, while dispute-related motives predicted all types of cybervictimization. First-generation migration background, ethnicity-based cybervictimization and perceived strain all played an important role in the different coping strategies. In sum, ethnic/racist cybervictimization seems prevalent especially among first generation adolescents, who are affected in a comparable manner as non-immigrants. Adolescents with a first-generation migration background seem to be especially vulnerable. Prevention and intervention efforts should focus on functional coping strategies especially for this group on the one hand. On the other hand, evidence-based intervention programs should be implemented to reduce bias and ethnicity-/race-based perpetration and victimization to foster successful acculturation and integration.

Keywords: ethnic/racial, bias, cyberbullying, cybervictimization, migration status, coping strategies

INTRODUCTION

Cyberbullying is an aggressive behavior which makes use of digital and electronic media to deliberately hurt others or make them feel uncomfortable by repeatedly sending offensive messages or visual materials. Usually, targets are in an inferior position and have difficulty defending themselves (Smith et al., 2006; Tokunaga, 2010). Depending on the media tools used for cyberbullying, the behavior can be more or less direct and more or less close to the target. Accordingly, Langos (2012) subdivided cyberbullying into direct cyberbullying where the perpetrator interacts directly and immediately with the victim, and indirect cyberbullying where the perpetrator communicates through public or semi-public channels such as posting negative comments about the victim in online social networks (a comprehensive overview of the numerous types of cyberbullying can be found in Scheithauer et al., 2021). Repeatedly, studies have shown cyberbullying to be a problem especially during adolescence and young adulthood with several studies showing inverse u-shapes of victimization and perpetration prevalence across age groups (Sevciková and Smahel, 2009; Barlett and Chamberlin, 2017; Wang et al., 2019; Pichel et al., 2021). Being a victim of cyberbullying is associated with detrimental outcomes, thus looking into the negative experiences of potentially vulnerable subgroups of cybervictims like adolescents with a migration background¹ seems highly relevant to understand the dynamics, outcomes, and prevention measures of cyberbullying.

As research into cyberbullying has been very dynamic in the past one and a half decades, a number of meta-analyses and reviews have been conducted in the meantime. A study summarizing 19 existing meta-analyses and reviews from 2007 to 2018 on the relationship between cyberbullying and mental and psychological outcomes in children and young people younger than 25 years reports that the psychological outcomes most often strongly negatively related to the experience of cyberbullying were depression, suicidality, anxiety, hostility/aggression, substance misuse/use, self-harm, ADHD/hyperactivity, low self-esteem, peer problems, stress/distress, loneliness, and low life satisfaction (Kwan et al., 2020). These outcomes can be indicators for clinical-psychological disorders such as acute stress, posttraumatic stress, mood disorders, somatization disorders, substance use, and school or social phobia (Schultze-Krumbholz and Scheithauer, 2015). However, since none of the included studies was based on longitudinal data, the causal relationship remains unclear (Kwan et al., 2020). Marciano et al. (2020) conducted a meta-analysis on longitudinal associations of cyberbullying perpetration and victimization with potential risk and protective factors and negative outcomes

among children and adolescents up to the age of 18 years. They included 34 studies that considered cybervictimization as a predictor and found a small to medium effect size for depression as well as for anxiety. The effect sizes for behavioral problems and relationship problems with peers marginally missed significance when pooling the five and seven included studies, respectively. A systematic review and meta-analysis on academic outcomes of cybervictimization reports that across 12 studies cybervictimization was associated with school attendance problems and school achievement problems. Single studies reported negative associations with school safety, school engagement, exclusionary discipline, future aspirations, and school life satisfaction, but were too few to be included in the meta-analytic computations (Gardella et al., 2017).

These reviews and meta-analyses substantiate negative outcomes of cybervictimization in general, but they may miss differential effects. Some studies indicate that there might be different effects in specific subgroups. For example, although, when asked explicitly, a large group reported that they did not feel bothered by cybervictimization, this group consisted mostly of boys while at the same time there was a group that showed a multitude of negative emotions such as anger, fear, and sadness. Female students, younger students and those being victimized more frequently were more likely to report several indicators of emotional strain (Ortega et al., 2012). Regarding mediating or buffering variables, a large-scale study with more than 28,000 students found that cybervictimization was not only related to psychological maladjustment, but also to academic problems like poor grades and school truancy and that student connectedness buffered internalizing problems (Morin et al., 2018). School connectedness is related to the basic need for affiliation or belongingness. Cybervictimization threatens the fulfillment of this need to belong (Wong et al., 2014; Kashy-Rosenbaum and Aizenkot, 2020) and cyberbullying is intensified by it (Pfetsch et al., 2021). However, this may be important especially in the context of acculturation and integration of students with migration backgrounds into classes and schools. For example, Schultze-Krumbholz and Ohlemann (2021) were able to show that offline bullying victimization that specifically referred to the (assumed) origin, culture, skin color, or religion of the target was negatively linked to sense of belonging to school among more than 2,300 adolescent students. A stronger sense of belonging has been associated with academic and psychosocial adjustment for refugee students (e.g., Kia-Keating and Ellis, 2007; Suárez-Orozco et al., 2009; Tyrer and Fazel, 2014). Also, a sense of belonging (to school) fosters social acceptance and sociocultural adaptation for immigrant students (e.g., Schachner et al., 2018). Since ethnicity- or race-based bullying and cyberbullying refer to elements of identity and the self, these subtypes of peer aggression may be especially detrimental for targeted children and adolescents (e.g., Mendez et al., 2016; Schachner et al., 2018).

ETHNICITY- AND RACE-BASED CYBERVICTIMIZATION

Although research on ethnicity- or race-based bullying has been going on at least for three decades (Kuldas et al., 2021) it has

¹The term “migration background” refers to persons who live in Germany and themselves and/or one or both of their parents were not born in Germany (in a wide sense also persons whose grandparents were not born in Germany). The vast majority of these individuals with heritage from outside of Germany are German in a legal sense (they have the German citizenship) and feel German. Other than terms like “race” or “ethnicity” in the US, the term migration background is a derived category stemming from a national census and not a label that people self-identify with (Moffitt and Juang, 2019). We are aware of the Othering effects such a term can have, and use it with the intention to shed a light on the specific situation of persons ascribed as not being German from the perspective of the majority culture.

especially gained interest in recent years with increasing public awareness of migration movements as well as awareness of xenophobic attacks across the globe. Europe has seen a constant increase of migration since 2000 which is unlikely to change in the next 20 years (European Commission, 2015). However, migration to Europe has not just been taking place since the turn of the millennium. Apart from migration movements in previous centuries, Germany, for example, signed guest worker agreements with Italy, Spain, Greece, Turkey, Morocco, Portugal, Tunisia, and Yugoslavia, among others in the 1950's and 1970's for labor migrants to come to Germany. In 2021, for example, Germany celebrated "60 Years of Recruitment Agreement with Turkey." Thus, many of the students today which are ascribed a migration background are actually second- or even third-generation immigrants. In 2020, almost 27% of the population in Germany had a migration background in the broadest sense, i.e., they were immigrants themselves or their parents or grandparents were immigrants, making them so-called first-, second-, or third-generation immigrants. However, this number increases significantly when considering only the younger age groups: among 0–5 year-olds about 40% were immigrants or descendants of immigrants. In the age groups 5–10 and 10–15 years old the percentages were 40 and 38%, respectively (Statistisches Bundesamt, 2021). Thus, a considerable proportion of school students in Germany are ascribed a migration background.

While studies have shown that biculturalism, i.e., identification with both the heritage culture and the majority culture, increases wellbeing and adjustment (Nguyen and Benet-Martínez, 2013; Schwartz et al., 2015), the social, educational, vocational and political integration of persons with migration background largely depends on the society of migration destination. Besides positive reactions, interest in cultural pluralism, and tolerance, also negative reactions of the majority culture are possible. For adolescents with a migration background being targeted by peers offline or online based on ethnic, racial, or cultural characteristics may be especially detrimental because adapting to a country with a different culture, language, or tradition already requires extensive psychological and social investment to fulfill different basic needs such as the need to belong. Experiencing rejection, especially concerning an integral and unchangeable part of the own identity, in a period of transition and identity formation may be a devastating experience.

In the present study, we focus on the online context and we defined ethnicity- or race-based cybervictimization as being a target of cyberbullying (e.g., being insulted or socially excluded online) because of the self-identified or other-identified ethnicity, race, or cultural group of the victim (Fandrem et al., 2009; Kuldás et al., 2021). The victim does not necessarily have to actually belong to the respective social group. We adopt the viewpoint of Wachs et al. (2016), among others, that it is already sufficient that the victim shows a perceptible characteristic (such as wearing a headscarf) or that the perpetrator(s) assume the victim to belong to a specific ethnic group. Ethnic bullying can also be defined as inter-ethnic bullying for ethnical reasons or purposes

(Kuldás et al., 2021), thus referring also to specific motives of the perpetrators for their behavior.

One way to approach the topic of ethnicity- or race-based cyberbullying is to compare prevalence rates between different ethnic groups regarding victimization in general and to draw conclusion about the victimization of specific ethnic groups. In this line, a number of studies from the US showed that White adolescents seem to be exposed to cyberbullying more often than Asian, Black or Hispanic students (e.g., Wang et al., 2009; Kupczynski et al., 2013; Barlett and Wright, 2018; Kowalski et al., 2020). More comprehensive (narrative) literature reviews show similar results (e.g., Hamm et al., 2015; Edwards et al., 2016). Edwards et al. (2016) included 15 studies in their review and reported prevalence rates of 4–17% for Black, 6–13% for Hispanic, 15–18% for Asian (with one outlier at 57%), and 18–30% for White adolescents. Hamm et al. (2015) included seven studies of which two studies from the US specifically reported White adolescents to be at higher risk while three studies including data from outside of the US found no effect of ethnicity.

As already indicated in the study by Hamm et al. (2015), results on the effect of ethnicity are inconsistent. Other studies found more cybervictimization for ethnic and racial minorities. For example, using a nationally representative sample of 8,481 US students aged 10 to 14 from the HBSC study, Hong et al. (2021) found that Hispanic and Black students were the most likely to experience cybervictimization (12.6 and 11.6%, respectively), while White and Asian students were less likely to be victimized online (10.8 and 7.0%, respectively). Generally, when asked about their experiences in online social networks, Black adolescents were less likely to report that people their age were kind to each other online compared to White and Latino adolescents (56 vs. 72 and 78%, respectively, Lenhart et al., 2011). Llorent et al. (2016) found no differences for cybervictimization between majority and minority groups among 2,139 adolescents in Spain when all ethnic minority groups were collapsed into one group, but differences emerged when examining specific ethnic minorities, that is, in their study Roma experienced significantly more cybervictimization than students from the ethnic majority group. Rodríguez-Hidalgo et al. (2018) found in their study with a representative multicultural sample with more than 25,000 adolescents that youth of Romanian origin were more likely to be cybervictims than youth of Spanish origin and that the patterns of predictors of cybervictimization differed across ethnic groups. Calmaestra et al. (2020) moreover found differences by migration generation: first-generation Roma and immigrant youth were more often both cybervictims and cyberbullies while second-generation youth were more likely to be cybervictims compared to the ethnic majority. Still other studies did not find any differences in cybervictimization by ethnic group (Hinduja and Patchin, 2007; Sourander et al., 2010; Bauman et al., 2013). So, while in the US Hispanic and Black youth seem to experience less cybervictimization than White youth, they show comparable rates of negative mental health outcomes. For example, Edwards et al. (2016) found that at lower rates of cybervictimization, youth of color experience the same levels of suicidal ideation and attempts. While the presented results generally speak for less

cybervictimization among minority youth, evidence outside of the U.S. is contradictory and scarce.

Different authors offer explanations for the (seemingly) higher rates of cybervictimization of White students and most often refer to media equipment and media usage patterns which are believed to differ by ethnicity (Barlett and Wright, 2018; Hong et al., 2021). Moreover, Hong et al. (2021) suggest that students from different ethnic groups perceive and report cybervictimization differently depending on their peer context. Kuldās et al. (2021) point out measurement issues similar to the ones found by Vitoroulis and Vaillancourt (2015) in their meta-analysis on offline bullying where they found that, for example, Black students showed higher levels of victimization in studies focusing on childhood, in unpublished studies, in studies not presenting a definition of bullying, and in peer-nomination and questionnaire studies not using the Olweus Bully/Victim Questionnaire. Thus, different media usage patterns, perceptions of cybervictimization, and measurement of cybervictimization are suggested to explain different cybervictimization prevalence rates of minority and majority groups.

Moreover, when looking specifically at ethnic-related contents of bullying, adolescents from minority groups very well show higher levels of victimization than majority youth (e.g., Strohmeier et al., 2005; Mendez et al., 2016; Zych and Llorent, 2021). This second approach to ask specifically about victimization targeting ethnic or racial characteristics seems more adequate to represent the experience of ethnic minority adolescents. However, there is very little research using this approach, especially regarding cybervictimization. In a study with 13,177 adolescents from the US, Mendez et al. (2016) found that more than 10% of adolescents were victimized offline with a focus on ethnicity or race. Other forms of victimization were more common, though. For example, students were more likely to be targeted for personal characteristics than for race. However, racially victimized students were at a higher risk for polyvictimization, that is, they were more likely to also be targeted for other reasons. Among 2,139 adolescents in Spain, 27.4% of first- and 21.0% of second-generation immigrant youth were bias-based cybervictims as compared to 7.4% of adolescents of the majority group (Zych and Llorent, 2021). In sum, these studies imply that adolescents from minority groups experience (cyber-)victimization targeting race or ethnicity at a considerable extent and more often than adolescents from majority groups.

Apart from the general impact of cybervictimization on youth as presented above, ethnic- or race-based cybervictimization may have additional negative outcomes. For example, it may have serious implications for class and school climate in multicultural schools, especially regarding future aggression levels. In a study with 179 immigrant and non-immigrant adolescents in the US on offline ethnic-based victimization especially immigrant students judged retaliation to be an acceptable reaction to ethnic-based victimization (Gönültaş and Mulvey, 2021). In a study on workplace offline race-based victimization, Wu et al. (2015) found racial victimization to be associated with race-related stress which in turn was related to race-based rejection sensitivity, i.e., being vigilante and anxious about future race-related incidents.

COPING STRATEGIES FOR CYBERBULLYING

According to Lazarus and Folkman (1984), coping is understood as a cognitive or behavioral attempt to deal with internal and/or external demands that exceed the person's perceived resources (Völlink et al., 2013). According to the Transactional Model of stress and coping by Lazarus and Folkman (1984), two levels of appraisal are conceptualized for dealing with stress. One is primary appraisal, where the meaning people ascribe to stressful situations is influenced by their values, commitments, and goals, which are typically influenced by the experience of stress. Secondary appraisal involves the evaluation of different coping strategies and their outcomes. After evaluating the situation to be coped with and deciding on a coping strategy, the chosen strategies are put into action. The cognitive assessments of the threat determine the coping style chosen (Wright et al., 2016). Among numerous approaches to the conceptualization of coping strategies, Lazarus and Folkman (1984) classified them into problem-focused coping strategies, emotion-focused coping strategies and avoidance-focused coping (Raskauskas and Huynh, 2015; Biggs et al., 2017). Problem-focused coping involves active attempts to find solutions and emotional-focused coping involves the regulation of emotions such as relativization or reinterpretation. Avoidance-oriented coping refers to the victim's attempt to relieve themselves mentally or physically of the stressful situation (Raskauskas and Huynh, 2015; Biggs et al., 2017). With regard to adolescents' coping strategies, the support of parents and friends is also significant (Beyer and Lohaus, 2007; Pfetsch et al., 2014). During adolescence, young people have to adjust to and learn to cope with cognitive, social, emotional, and physical changes. An important aspect in connection with the associated coping strategies in this fragile phase of life can also be the cultural background. Copeland and Hess (1995) showed in their study that young adults differed in their self-reported coping strategies based on their ethnicity. For example, Hispanic immigrant youth reported coping with stress more often through social activities (e.g., "Be close with someone you care about") and seeking spiritual support (e.g., "talk to a minister/priest/rabbi") than non-immigrant youth. Similar results were shown by D'Anastasi and Frydenberg (2005): the Australian minority group (consisting of Asian, African, Pacific Islander, and Middle Eastern students) were more likely to cope with stressful situations through spiritual and social support than their Anglo-Australian peers. But what are the strategies for coping with stress, especially in the context of cyberbullying and how do they differ in connection with different ethnic or cultural origins? Since cyberbullying, unlike offline bullying, can only take place digitally, technical solutions are also used to combat it, for example, changing the username or account ID, changing the email address or phone number, unfriending on social networks and blocking messages or users (Hinduja and Patchin, 2007; Raskauskas and Huynh, 2015). Furthermore, Völlink et al. (2013) examined coping strategies related to cyberbullying. Similar to previous studies, three main categories were formed as coping strategies with corresponding

subcategories such as: Depressive-emotional coping with the subcategories anger, sadness, and letting it happen, seeking social support with the subcategories teachers, parents, and friends, and avoidance and palliative coping with the subcategories acceptance and ignoring. While there are studies that focus on specific negative coping strategies such as alcohol abuse in the context of cyberbullying and distinguish between adolescents of different backgrounds (Chan et al., 2019), there are several studies that examine only one specific ethnic group and their coping strategies in the context of cyberbullying. For example, Aricak et al. (2008) found that 25% of Turkish adolescents often sought support from their parents and friends, and 30.6% decided to use active solutions, such as blocking the offender. Apart from this, little is currently known about how cyberbullying coping strategies differ between youth of different backgrounds in the same country. Specifically referring to ethnicity-based or bias-based cybervictimization, Mendez et al. (2016) examined coping strategies regarding their use and effect on the severity of emotional impact. The most frequently used strategy was to tell an adult at school (95%). However, 64% of adolescents reported that this made the situation worse and only 24% believed that the situation got better afterwards. Some of the strategies actually increased the severity of the emotional impact, such as planning to retaliate or fight, telling the person how the victim felt, and telling adults (at school and at home). Out of 12 strategies, the only effective one was to make a joke out of the race-based victimization to reduce the emotional severity of the incident. Overall, evidence on differences in coping strategies for ethnicity-/race-based cybervictimization between ethnic groups is very limited and if existent, reveals no or very few significant differences.

MOTIVES FOR CYBERBULLYING

The term “motive” as it is traditionally used in cyberbullying research, does not equate to the understanding in motivation psychology and motivation research, where, for example, McClelland (1985) defined motivation as a situational state consisting of a combination of enduring and general patterns which he called motives. It is assumed that everyone possesses these motives, but in different degrees. In cyberbullying (and partly media studies) literature, the terms “motives,” “motivations,” and “reasons” are often used interchangeably (e.g., König et al., 2010; Shapka and Law, 2013; Hamuddin et al., 2019) to describe gratifications that are sought (Sheldon and Bryant, 2016). To stay consistent with the literature in the field, we will also use the term “motive,” but we emphasize that it cannot be understood from a motivation psychology perspective.

The forms of digital aggression can be very diverse, such as direct or indirect cyberbullying (Slonje and Smith, 2008; Salus, 2012), so the motives of the person committing cyberbullying can also vary (Hamuddin et al., 2019). In general, the literature often distinguishes between two types of aggressive motives, namely reactive aggressiveness, which occurs, for example, after a provocation and is closely associated with feelings of anger (Berkowitz, 1989), and proactive aggressiveness (Bandura,

1979), which describes a planned behavior and is associated with pleasant feelings related to social standing (Solomontos-Kountouri and Strohmeier, 2021).

Numerous studies have examined the motives for (cyber-)aggression from the perpetrator’s perspective (Calvete et al., 2010; Strohmeier et al., 2012; Shapka and Law, 2013; Solomontos-Kountouri and Strohmeier, 2021), such as Sitzler et al. (2012), who found that perpetrators mainly gave so-called “hot” motives as reasons for their behavior, like being annoyed by the victim or being angry with the victim. Furthermore, more than 40% of the respondents stated that hatred of the person or the desire for revenge was the motive for cyberbullying. It is also interesting to note that 25% of the participating adolescents acted out of pleasure, curiosity or boredom. In terms of ethnicity, most studies also refer to the motives of the perpetrators (Strohmeier et al., 2012; Shapka and Law, 2013; Solomontos-Kountouri and Strohmeier, 2021). Accordingly, Strohmeier et al. (2012) were able to show that the motives for bullying by immigrant adolescents in Austria and Norway were acceptance among peers and feelings of belonging. In a study by Comas-Forgas et al. (2017) adolescents indicated that their belonging to a different country was an explanatory factor for their experiences of cyberbullying. As a reason for their own bullying behavior, they cited having been provoked beforehand. To our knowledge, there is only one recent qualitative study by Gardella et al. (2020) that provides evidence on the motives from a victim perspective, for which immigrant youth are bullied at school. The sample consisted of 71% Caucasian, 20% African American, 6% Latino/Hispanic, 2% Asian, and 1% Native American adolescents in grades 9–12. The statements about the motives for being bullied were produced in open-ended questions and the answers were analyzed qualitatively. They were classified into five categories: relational dynamics, physical characteristics, non-physical personal characteristics, external characteristics, and other reasons. A substantial number of answers referred to race/ethnicity and religion (as well as other dimensions of bias-based reasons) which were subsumed under the non-physical characteristics. Participants also said they were bullied because of their language skills. Yet, the latter aspect did not distinguish between migrants and non-migrants. Since previous studies have focused mainly on the perpetrators’ perspective and/or on aggressive offline behavior, it is of particular importance to use quantitative studies to investigate what motives can be found in the online context in order to address and help the needs of victims of cyberbullying as well as to see if there are differences between migrants and non-migrants in this context and to be able to provide constructive solutions.

AIMS OF THE STUDY

A substantial part of the existing literature focuses on the situation in the United States. Studies from other countries or meta-analyses including other countries indicate that the situation in the US may not be easily transferable to European samples and that in non-US samples adolescents from ethnic minorities might indeed be more likely to experience

cybervictimization than majority youth. We therefore examine ethnicity-/race-based cybervictimization in an adolescent sample from Germany as a country outside of the US. Also, knowledge on ethnicity-/race-based online victimization is rather scarce as compared to offline victimization. We therefore aimed to contribute to this knowledge base. Moreover, we focus on the online experiences of being targeted specifically for (supposedly) belonging to specific social and/or minority groups within one country, that is, we aim to examine cybervictimization with specific ethnicity- and race-based contents.

Our hypotheses were:

1. Ethnicity/race-based motives for cybervictimization (e.g., language, religion, appearance) vs. non-ethnic-related motives (e.g., dispute, academic achievement) are less prevalent overall, but more prevalent among first-generation and second-generation adolescents with migration background.
2. Adolescents with a migration background show higher levels of strain related to cybervictimization than adolescents without a migration background.
3. Adolescents with a migration background show comparable coping strategies for cybervictimization than adolescents without a migration background.

MATERIALS AND METHODS

Procedure

Data collection was conducted by trained test administrators in regular school time with paper-pencil questionnaires. Most students needed about 20 min to fill in the questionnaire. Test administrators explained the topic of the study and how to answer the questions. In case of questions, test administrators could resolve any unclear points and helped students to understand the questionnaire. Participants and their parents (for participants under 14 years) had to give informed consent and participation was voluntary and anonymous.

Sample

The participants were recruited from three schools in a big German city, with 59% of the participants visiting low academic track schools (Integrierte Sekundarschule), and 41% attending high academic track schools (Gymnasium). In total, $N = 348$ adolescents participated, aged from 11 to 18 years, $M = 14.1$, $SD = 1.2$ years. The sample was evenly distributed among males and females (50% each) and most participants spent around 3 h per day on the internet ($M = 2.31$, $SD = 1.35$, on a scale from 0 = <1 h, 1 = 1–2 h, 2 = 2–3 hours, 3 = 3–4 h, to 4 = more than 4 h daily).

Regarding ethnicity, we assessed *migration background* based on information about the place of birth of the participants and their parents (see PISA; Hertel et al., 2014). From this information, we assigned 21% the sample to the group *no migration background* (child and both parents born in Germany), 14% to the group *first-generation migration background* (child born in another country, at least one parent born in another country) and 66% to the group *second-generation migration background* (child born in Germany, parents born in another

country). As intended, the sample was ethnically diverse, which was also indicated by the languages spoken at home, 72.5% spoke German at home and 73.4% spoke other languages than German at home (mostly Turkish, Arabic, Kurdish, or Polish).

Measures

Participants filled in a questionnaire about cyberbullying, perceived strain, motives for cybervictimization and coping behavior. The scales were adapted from a comprehensive study about cyberbullying in Germany by Sitzler et al. (2012). The adaptation of the scales included the selection of items (e.g., in the case of cybervictimization items were selected concerning harassment, damage to reputation, outing and trickery, and social exclusion, but items were omitted concerning happy slapping, endangerment by third parties, sexual harassment, and cyberstalking) and adding items concerning ethnicity (e.g., in the case of cybervictimization all items of the subscales language related cybervictimization and ethnically based cybervictimization were added). Please refer to the **Supplementary Material** for a detailed documentation of the original and added items and the results for the exploratory factor analyses, scale and item characteristics.

Cybervictimization was measured on a 5-point Likert scale (0 = *not at all* to 4 = *several times a week*) in the previous 6 months. Based on an exploratory factor analysis the following subscales were calculated by using mean scores: *Relational Cybervictimization* (5 Items, $M = 0.25$, $SD = 0.49$, $\alpha = 0.79$, e.g., “Has anyone pretended to be you and spread or posted things around to destroy your reputation or friendships?”), *Language related Cybervictimization* (3 Items, $M = 0.12$, $SD = 0.43$, $\alpha = 0.80$, e.g., “Have you been excluded on the Internet from a group with another language?”), and *Ethnically based Cybervictimization* (5 Items, $M = 0.12$, $SD = 0.33$, $\alpha = 0.80$, e.g., “Have you been insulted on the Internet because of your culture?” or “Has anyone attacked you on the internet because of your appearance (skin color, hair color etc.)?”). *Strain* resulting from cybervictimization was measured on a 5-point Likert scale (0 = *not at all*, 4 = *very strongly*) concerning all aforementioned items on cybervictimization (13 Items, $M = 0.24$, $SD = 0.52$, $\alpha = 0.87$, e.g., “How stressful was this experience for you?” (with regard to each item of cybervictimization)). *Coping* of Cybervictimization was measured on a 4-point Likert scale (0 = *does not apply*, 3 = *applies completely*, “How did you react to this experience?”), based on an exploratory factor analysis the following three subscales emerged: *Ignoring* (8 Items, $M = 0.67$, $SD = 0.95$, $\alpha = 0.91$, e.g., “Over time, I got accustomed to what happened”), *Social Adaptation* (4 Items, $M = 0.22$, $SD = 0.48$, $\alpha = 0.79$, e.g., “I adapted myself (died my hair, took off headscarf, changed behavior, or way of talking”), and *Revenge* (3 Items, $M = 0.40$, $SD = 0.83$, $\alpha = 0.67$, e.g., “I defended myself aggressively”). Finally, *Motives for Cybervictimization* were measured on a 4-point Likert scale (0 = *does not apply*, 3 = *applies completely*) with response to the question “What do you think was the reason that you were bullied via Internet or mobile phone?” The following subscales were built on exploratory factor analysis: *Dispute-related Motives* [4 Items, $M = 0.51$, $SD = 0.76$, $\alpha = 0.82$, e.g., “I had a quarrel with the person(s)"] and *Ethnic-related Motives* (4 Items, $M = 0.37$,

$SD = 0.77$, $\alpha = 0.71$, e.g., “Because of my language or accent”). Additionally, two single items were included: *Achievement* ($M = 0.21$, $SD = 0.63$ “Because of my school achievements”) and *Unclear reason* ($M = 0.42$, $SD = 0.91$, “I don’t know the reason”).

Analysis Plan

Data were checked for distribution and assumptions for the statistical tests (Field, 2013). We calculated correlations for describing the relation between study variables. Because they were not normally distributed, we calculated descriptive means and Kruskal-Wallis-Tests to compare the motives for cybervictimization across migration-background groups (hypothesis 1). We tested the difference for migration-background groups concerning the dependent variable strain (hypothesis 2). Assumptions for a *t*-Test for independent groups were not met (different group sizes with $N = 263$ participants with and $N = 71$ participants without migration background; no normal distribution in both groups, Kolmogorov-Smirnov $D(263) = 0.319$, $p < 0.001$ and $D(71) = 0.346$, $p < 0.001$, respectively, unequal variances, Levene’s $F_{(1,332)} = 13.97$, $p < 0.001$). Thus, we calculated a non-parametric Mann-Whitney-*U*-Test.

Further, we calculated hierarchically multiple regression analyses to predict the forms of cybervictimization (hypothesis 1) and forms of coping (hypothesis 3). For both dependent variables, we included age, gender, internet use per day, and the dummy-coded migration background (first-generation migration background, second-generation migration background) in a first step, and in a second step motives for cybervictimization (to predict the forms of cybervictimization) or the forms of cybervictimization (to predict coping of cybervictimization). Assumptions for regression analyses were analyzed for the forms of cybervictimization and for the forms of coping (Field, 2013): Residuals were normally distributed (only slight deviations based on visual inspection of p-p-plots), had homogeneous variance (no systematic deviation in the standardized residuals against standardized predicted values), and showed no indication for autocorrelation (Durbin-Watson between 1 and 3). Tolerance > 0.02 and VIF < 10 did not indicate multicollinearity. In sum, assumptions for all outcomes were in a way fulfilled that we could perform the regression analyses.

RESULTS

Bivariate correlations indicated that the forms of cybervictimization (ethnically-based, language-related and relational cybervictimization), the cybervictimization motives (dispute-related, ethnic-related) and the coping strategies (ignoring, social adaptation, revenge) all were significantly related to strain and to each other (see **Table 1**).

Hypothesis 1 expected that cybervictimization with ethnic-related motives vs. non-ethnic-related motives (e.g., dispute, academic achievement) would be less prevalent in general, but more prevalent among first-generation and second-generation students with migration background. Indeed, the results of the Kruskal-Wallis-Tests indicate that participants with migration background (both, first- and second-generation migration)

reported ethnic-related motives more often than participants without migration background (see **Table 2**).

Additionally, a Friedman’s ANOVA showed that the prevalence of the reported motives for cybervictimization differed in the complete sample [$\chi^2_F(df = 3, N = 272) = 53.33$, $p < 0.001$]. Contrary to our expectations, follow-up Wilcoxon analyses showed that ethnic-related motives did not differ from dispute-related motives ($T = 0.188$, $p = 0.090$, $r = 0.10$), but achievement motives were significantly less prevalent than dispute-related motives ($T = 0.482$, $p < 0.001$, $r = 0.26$) and ethnic-related motives ($T = 0.294$, $p = 0.008$, $r = 0.16$).

Comparing the multivariate prediction of the forms of cybervictimization, we conducted hierarchical regression analyses with control variables and migration status in the first step and the cybervictimization motives in the second step. As displayed in **Table 3**, first-generation students with migration background (compared to participants without migration background) reported ethnic-based cybervictimization more often. However, including the cybervictimization motives in the second step resulted in a significant prediction only by dispute-related and ethnic-related motives. Regarding language-related cybervictimization and relational cybervictimization, also the cybervictimization motives significantly predicted the dependent variables. Thus, in the context of the other variables, not the migration background but the reported motives for cybervictimization were significant predictors of the three forms of cybervictimization. Interestingly, ethnic-related motives positively predicted ethnic-based cybervictimization and language-related cybervictimization.

Hypothesis 2 assumed that persons with migration background would show higher levels of strain related to cybervictimization than persons without migration background. Against the expectation, the Mann-Whitney-*U*-Test revealed no significant difference between participants with migration background ($N = 263$, $M = 0.27$, $SD = 0.57$, mean rank = 171.56) and without migration background ($N = 71$, $M = 0.11$, $SD = 0.23$, mean rank = 152.48), $U(N = 334) = 10,403.00$, $p = 0.095$, $z = 1.668$.

Hypothesis 3 expected that participants with migration background would show comparable coping strategies concerning cybervictimization to participants without migration background. In three hierarchical regression analyses, first-generation migration background or second-generation migration background (compared to participants without migration background) were no significant predictors for the coping styles social adaptation and revenge (see **Table 4**). However, for the coping style ignoring cybervictimization, being a first-generation youth with migration background was a positive predictor and stayed significant even after inclusion of the forms of cybervictimization and strain into the model. Among the forms of cybervictimization, only ethnically-based cybervictimization was a significant predictor for social adaptation, language-related cybervictimization and relational cybervictimization did not add to the prediction of coping styles. Strain was a positive predictor for ignoring cybervictimization and social adaptation. The explained variance in all three regression analyses were small, but significant ($R^2 = 0.13$ for

TABLE 1 | Correlations.

	Language	Relational	Motive: dispute	Motive: ethnicity	Coping: ignoring	Coping: social adaptation	Coping: revenge	Strain
Ethnicity-Based cybervictimization	0.62***	0.49***	0.31***	0.26***	0.20***	0.30***	0.27***	0.49***
Language-Related cybervictimization		0.52***	0.32***	0.27***	0.20***	0.23***	0.26***	0.30***
Relational cybervictimization			0.41***	0.18**	0.26***	0.25***	0.22***	0.46***
CV motive: dispute-related				0.60***	0.52***	0.38***	0.38***	0.35***
CV motive: ethnic-related					0.40***	0.36***	0.64***	0.23***
Coping: ignoring						0.55***	0.60***	0.29***
Coping: social adaptation							0.54***	0.29***
Coping: revenge								0.18**

277 < N < 344. **p < 0.01, ***p < 0.001.

TABLE 2 | Kruskal–Wallis-Tests concerning the motives for cybervictimization.

	Complete sample		Without migration background		First-generation migration background		Second-generation migration background		Kruskal–Wallis test statistics (df = 2)		
	M	SD	M	SD	M	SD	M	SD	H	n	p
Motive: ethnic	0.37	0.77	0.15 ^{BC}	0.36	0.54 ^A	0.76	0.40 ^A	0.86	10.63	281	0.005
Motive: dispute	0.52	0.76	0.29 ^{BC}	0.58	0.62 ^A	0.77	0.57 ^A	0.81	9.58	281	0.008
Motive: because of my school achievements	0.21	0.62	0.06 ^C	0.40	0.28	0.77	0.25 ^A	0.65	6.07	279	0.048
Motive: I don't know the reason	0.42	0.91	0.29 ^B	0.86	0.79 ^{AC}	1.10	0.38 ^B	0.86	11.69	271	0.003

Significant results of pairwise comparisons are displayed as different superscript indices. Example: Concerning the ethnic-related motives the group "without migration background" (group A) was significantly different compared to "first-generation migration" (group B) and "second-generation migration" (group C), whereas concerning the motive "Because of my school achievements." "without migration background" (group A) differed significantly only from "second-generation migration" (group C).

TABLE 3 | Hierarchical regression analysis concerning forms of cybervictimization.

	Ethnicity-Based cybervictimization		Language-Related cybervictimization		Relational cybervictimization	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Age	0.15*	0.11	0.12	0.07	0.07	0.00
Gender (0 = m, 1 = f)	0.00	−0.04	−0.04	−0.09	0.08	0.01
Internet use per day	0.03	0.04	0.05	0.07	−0.01	0.02
First-generation migration background	0.16*	0.06	0.09	−0.00	0.12	0.04
Second-generation migration background	0.07	−0.00	0.11	0.04	0.07	−0.01
CV motive: dispute-related		0.15*		0.24***		0.40***
CV motive: ethnic-related		0.28***		0.19**		0.07
ΔR^2		0.14***		0.14***		0.18***
R^2	0.05*	0.19***	0.03	0.17***	0.02	0.20***

Constant not displayed, standardized regression parameters; migration groups compared to participants without migration background; coding of gender male = 0, female = 1 (3 participants without information excluded). Academic achievement motive not included because it was a single item. N = 265 (ethnically based cybervictimization), N = 263 (language based cybervictimization), N = 265 (relational cybervictimization). *p < 0.05, **p < 0.01, ***p < 0.001.

ignoring cybervictimization, $R^2 = 0.15$ for social adaptation, and $R^2 = 0.12$ for relational cybervictimization, respectively).

DISCUSSION

The present study contributes to the knowledge base about ethnicity-/race-based cybervictimization by not dividing the

sample into different ethnic or race groups and comparing their prevalence rates, but by focusing specifically on ethnicity- or race-related contents of cyberbullying experiences.

The results for hypothesis 1 showed that disputes and quarrels are generally the most common reason for cybervictimization, but ethnic-related motives were also reported often. This is in line with research by Mendez et al. (2016) who found

TABLE 4 | Hierarchical regression analysis concerning forms of coping.

	Coping: ignoring cybervictimization		Coping: social adaptation		Coping: revenge	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Age	0.08	0.04	0.07	0.01	-0.04	-0.08
Gender (0 = m, 1 = f)	0.08	0.05	0.03	0.01	-0.09	-0.10
Internet use per day	-0.01	-0.02	-0.09	-0.10	-0.02	-0.03
First-generation migration background	0.18*	0.14*	0.08	0.03	0.02	-0.03
Second-generation migration background	0.07	0.01	0.04	-0.01	0.09	0.05
Ethnicity-Based cybervictimization		-0.03		0.19*		0.15
Language-Related cybervictimization		0.10		0.02		0.09
Relational cybervictimization		0.11		0.06		0.10
Strain		0.21***		0.18**		0.05
ΔR^2		0.10***		0.13***		0.10***
R^2	0.04	0.13***	0.02	0.15***	0.02	0.12***

Constant not displayed, standardized regression parameters; migration groups compared to participants without migration background; coding of gender male = 0, female = 1 (3 participants without information excluded). $N = 272$ (ignoring cybervictimization), $N = 265$ (social adaptation), $N = 267$ (revenge cybervictimization). * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

that individual characteristics were a more frequent reason for cybervictimization. However, the motives were assessed as perceived by the victims and at least some personal disputes may still have their roots in bias-based or racist attitudes although these might not be communicated explicitly. According to Nansel et al. (2001), bullying others for personal reasons or individual characteristics may be more socially acceptable than referring to their ethnic, racial or religious background.

As expected in hypothesis 1, first-generation and second-generation youth with migration background reported cybervictimization for ethnicity-related motives significantly more often than youth without migration background. First-generation adolescents generally reported the highest rates on all cybervictimization motives and seem to be the most vulnerable group. Although adolescents without migration background also report ethnicity-related motives for their cybervictimization, it takes place at a much lower level. Looking at cybervictimization for specific and different motives provides a more differentiated picture as to whom and why is victimized online. These results contradict many of the research results from US samples (e.g., Wang et al., 2009; Kupczynski et al., 2013; Edwards et al., 2016; Barlett and Wright, 2018; Kowalski et al., 2020), but they are in line with a number of studies from Spain (Llorent et al., 2016; Rodríguez-Hidalgo et al., 2018; Zych and Llorent, 2021) where the ethnic composition is more similar to Germany. Similar to the results of Calmaestra et al. (2020) first-generation students with migration background were the ones with the highest rates of cybervictimization regarding all motives. Other authors (e.g., Dogan and Strohmeier, 2020) have previously also found first-generation youth to be at higher risk than second-generation adolescents with migration background.

In the regression analyses, after including dispute- and ethnic related motives into the model, the predictor first-generation migration background did no longer predict ethnicity-based cybervictimization. This could be a methodological artifact because ethnicity-based motives were a significant predictor for ethnicity-based and language-based cybervictimization and

first-generation adolescents showed the highest means on these motives. Additionally, first-generation youth reported much more often than youth without migration background that they did not know the reason for being cybervictimised. It appears that this group seems to be a rather vulnerable group in terms of cybervictimization (also indicated by the prediction of ignoring cybervictimization as a coping strategy, which is sometimes adaptive, but also can be an implication of a high stress).

Regarding hypothesis 2, students with a migration background did not show more strain than students without migration background. Cybervictimization seems to be equally stressful or not stressful for all migration status groups. Since the mean scores are quite close to zero, students with and without migration background similarly found the experiences not difficult for them. This might be a measurement issue because finding an experience “difficult” is a rather unspecific description and stress and wellbeing were not assessed with multidimensional instruments. Also, reporting to not feel bothered by cybervictimization might be an expression of coping by ignoring as was also seen in the study by Ortega et al. (2009).

When looking at coping strategies, some significant effects emerged. Although we assumed that there would be no difference in coping strategies between migration and non-migration background youth (hypothesis 3), first-generation migration status was a significant predictor for choosing to ignore cybervictimization. The only other significant predictor was strain, i.e., higher levels of strain were associated with ignoring cybervictimization more often. From the study by Mendez et al. (2016) we know that doing nothing, walking away from cybervictimization or ignoring it in the majority of cases do not lead to a change of the situation or even makes it worse. Since our data are cross-sectional, we cannot draw conclusion about whether ignoring the cybervictimization is a functional or dysfunctional approach in our sample. Students who experience more ethnicity-based cybervictimization and more strain were also more likely to adapt their behavior or appearance to the social situation as a way to cope. This might be

an indicator of acculturation orientation toward the host country (Germany) or at least the direct social environment. Whether this will reduce cybervictimization is unclear. Palladino et al. (2020) only found a negative association between ethnic-based victimization and acculturation orientation toward the host country for adolescents born in the host country with one native parent. For second-generation adolescents with two foreign-born parents this association marginally missed significance. Overall, very little is known about coping strategies and the association with ethnicity. The use of very different categorizations of strategies make a comparison with existing literature even more difficult. Our results therefore contribute to this area of research and should be extended in the future.

Following the reasoning by Kuldass et al. (2021), our findings can only be a snapshot of the situation and experiences of adolescents with a migration background as ethnicity- or race-based bullying underlies dynamic interactions between the individual and the context. The body of present research has shown that ethnic-minority students are not consistently at a higher risk of being victimized more often than ethnic-majority students. However, the quality (i.e., the contents and the impact on self-related outcome variables) of bullying might differ significantly.

LIMITATIONS

As every research, the current study is not without limitations. The study focuses on differences between migration groups and with the purposeful inclusion of a sample with high ethnic diversity it helps to clarify special experiences and strain by cybervictimization of first- and second-generation adolescents with migration background compared to adolescents without migration background. However, to enable statistical analyses we did not differentiate further within migration groups and cultural differences were not considered as well as reasons for migration. For example, outcomes for adolescents with forced migration experiences due to political repression or destruction of minimum subsistence means might differ from adolescents with purposeful migration for vocational or family reasons. Also, youth with migrant descent from different cultural regions might be perceived by others more directly as having a migration background (e.g., due to skin color, hair, dress, or language idiom) and therefore could experience different forms and frequencies of cybervictimization. Additionally, multiple social identities and intersectionality of identity dimensions like immigration status combined with gender, age, disability, or socio-economic status were not taken into account. Future research with large sample sizes should consider more subgroups and could reveal differential processes, effects, and outcomes. Additionally, we focused only on ethnicity- and race-related bullying, but we acknowledge that other forms of victimization and discrimination are prevalent, too, and should be analyzed as well. For example, we looked at religion more as an indicator of an adolescent's culture or ethnicity and did not take into account specificities of inter-religious bullying and religion-based motives. Therefore, we

do not sufficiently refer to this complex topic in order to draw firm conclusions about religion-based bullying. Further, the results rely on self-reported data and effects of social desirability bias or memory biases cannot be ruled out. Including more informants or additional data sources in future research might substantiate the results of the current study. However, research on victimization often builds on self-reports because the victims themselves have a unique position of self-referred information, especially concerning subjective perceptions and strain experiences. These limitations should be kept in mind when interpreting the results.

IMPLICATIONS

Concerning theoretical implications of the current study, future research could explore the appropriateness of the applied coping strategies in context. For this purpose, perceived self-efficacy of coping and associations of coping strategies with psychosocial outcomes for adolescents from different backgrounds could help to find out what might be adaptive strategies and, on the other hand, provide useful information on the effectiveness of the strategies in different contexts applied by different individuals (Raskauskas and Huynh, 2015).

In terms of practical implications, first-generation adolescents with migration background seem to be a vulnerable group for ethnic-related cybervictimization (based of religion, appearance, language). This is a worrying result and indicates that efforts to support the social, educational and vocational integration of newly immigrated youth are important and the acculturation process should be promoted further. The cybervictimization experiences related to ethnicity and race should warrant for the implementation of evidenced-based general anti-cyberbullying programs in school settings and beyond (e.g., the NoTrap! intervention program by Menesini et al., 2012; the KiVa antibullying program by Salmivalli et al., 2013; or the Media Heroes program by Schultze-Krumbholz et al., 2021). Additionally, interventions for adolescents with diverse cultural background and immigration experiences that support a positive integration should be implemented in work with youth (e.g., the Identity Project, Juang et al., 2020; or the promotion of intergroup contact between refugee and native children, Pfetsch et al., In press). Growing up in a multicultural society and dealing with diversity positively has been recognized as a new developmental task for adolescents (Fandrem et al., 2021, p. 361) and should be treated as such in the future. Thus, promotion of a positive attitude to diversity, supporting persons with immigration experiences and encouragement for a tolerant, inclusive society should be an aim for teaching and intervention in multicultural schools and multiple social contexts.

DATA AVAILABILITY STATEMENT

The datasets presented in this article are not readily available because the consent form for participants and legal guardians used in this study did not include publication of the data as open

source data. Requests to access the datasets should be directed to JP, jan.pfetsch@tu-berlin.de.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Responsible Senate Department. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

AS-K coordinated the work on the manuscript and drafted main parts. JP conceived and coordinated the study, conducted the statistical analysis, and helped to draft the manuscript. KL helped to draft the manuscript. All authors read and approved the final manuscript.

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SUPPLEMENTARY MATERIAL

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