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EDITED BY

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REVIEWED BY

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Universidad de Córdoba,
Spain
Hana Machackova,
Masaryk University,
Czechia

*CORRESPONDENCE

Alexander Wettstein
✉ alexander.wettstein@phbern.ch

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Hate speech in adolescents: A binational study on prevalence and demographic differences

Melisa Castellanos¹, Alexander Wettstein^{1*}, Sebastian Wachs^{2,3}, Julia Kansok-Dusche⁴, Cindy Ballaschk², Norman Krause² and Ludwig Bilz⁴

¹Institute for Research, Development, and Evaluation, Bern University of Teacher Education, Bern, Switzerland, ²Department of Educational Sciences, University of Potsdam, Potsdam, Germany, ³National Anti-Bullying Research and Resource Center, Dublin City University, Dublin, Ireland, ⁴Department of Health Sciences, Brandenburg University of Technology Cottbus Senftenberg, Senftenberg, Germany

Hate speech, or intentional derogatory expressions about people based on assigned group characteristics, has been studied primarily in online contexts. Less is known about the occurrence of this phenomenon in schools. As it has negative consequences for victims, perpetrators, and those who witness it, it is crucial to characterize the occurrence of offline (i.e., in the school) and online hate speech to describe similarities and differences between these two socialization contexts. The present study aimed to investigate the prevalence of hate speech witnessing, victimization, and perpetration, in a sample of 3,620 7–9th graders (51% self-identified as female) from 42 schools in Germany and Switzerland. We found that 67% of the students witnessed hate speech in their school, and 65% witnessed online hate speech at least once in the past 12 months. Approximately 21% of the students self-identified as offline perpetrators and 33% as offline victims, whereas these percentages were lower for online hate speech (13 and 20%, respectively). In both settings, skin color and origin were the most common group references for hate speech (50% offline and 63% online). Offline hate speech mainly came from classmates (88%), unknown sources (e.g., graffiti; 19%), or teachers (12%), whereas online hate speech mostly came from unknown persons (77%). The most frequent forms of offline hate speech were offensive jokes (94%) and the spread of lies and rumors about the members of a specific social group (84%). Significant differences by country, gender, and migration background were observed. Girls reported more offline victimization experiences, less perpetration, and a greater frequency of witnessing hate speech. This difference was larger in magnitude in the online setting. Students in Switzerland reported being exposed to hate speech more often than students in Germany. Students with a migration background reported higher hate speech victimization based on skin color and origin than students without a migration background. The high prevalence of hate speech highlights the need for school-based prevention programs. Our findings are discussed in terms of the practical implications.

KEYWORDS

hate speech, adolescents, discrimination, Europe, immigrants, gender differences, racism, cyberhate

1. Introduction

Hate speech includes direct or vicarious intentional derogatory expressions about people (e.g., images, words, and posts on social media) based on assigned group characteristics, such as ethnicity, nationality, gender, sexual orientation, disability, or religion, among others (Kansok-Dusche et al., 2022). Hate speech is perpetrated to hurt victims and has negative consequences at individual, communal, and societal levels (Wettstein, 2021; Kansok-Dusche et al., 2022; Wachs et al., 2022c). Hate speech endangers victims, perpetrators, and those who witness it and threatens social cohesion (Wettstein, 2021). While hate speech among adolescents has been studied almost exclusively in media and online contexts (Räsänen et al., 2016; Blaya et al., 2020; Wachs et al., 2021a; Kansok-Dusche et al., 2022), we know little about hate speech in offline settings such as schools (Wachs et al., 2021b), and the way it relates and differentiates from online hate speech. In addition, not much is known about the prevalence rates of hate speech in German and Swiss schools. We aimed to narrow this research gap by examining the frequency of witnessing, victimization, and perpetration of offline and online hate speech, who hate speech has been directed against, which form hate speech takes, and in which places it occurs at school. Moreover, similarities and differences between offline and online forms are described. Finally, we identified differences between countries, gender, and students with and without a migration background. Besides understanding how prevalent hate speech is, the findings provide valuable insights for anti-hate speech prevention programs.

1.1. A theoretical framework for the study of hate speech in school contexts during adolescence

We used the theoretical model for the study of hate speech in schools, proposed by Wachs et al. (2020), based on a socio-ecological perspective (Bronfenbrenner, 1996). This model poses that multiple factors can explain differences in the prevalence of hate speech between schools at four interrelated levels (Wachs et al., 2020). Specifically, the intrapersonal level (i.e., individual characteristics), the interpersonal level (i.e., features of social relationships), the school contextual level (i.e., features of the school context), and the societal level (i.e., cultural aspects that favor or impede hate speech; Wachs et al., 2020). In the present study, we focused on the intrapersonal level to describe the occurrence of hate speech in a specific context (i.e., the school) and a specific developmental period (i.e., adolescence).

The school context is a crucial setting for adolescents' healthy social development. Adverse peer experiences like hate speech jeopardize social relationships and have detrimental consequences for those directly and indirectly involved. Victims suffer physical and psychological consequences, such as emotional distress, depression, and anxiety (Gámez-Guadix et al., 2020; Krause et al., 2021; Wachs et al., 2022c). In perpetrators, hate speech leads to increased hatred (Robertz et al., 2016; Ballaschk et al., 2021). Additionally, witnessing hate speech is associated with desensitization, increased prejudice (Soral et al., 2018), and avoidance of inter-group contact (Cervone et al., 2021). Finally, hate speech prompts hostility in the whole group, fuels mistrust, and promotes social disintegration (Wettstein, 2021).

Moreover, theoretical and practical reasons sustain the significance of studying hate speech during adolescence. First, hate speech shares theoretical features with other well-studied phenomena, such as bullying (e.g., regarding imbalances of power). However, there are significant differences (see Ballaschk et al., 2022; Kansok-Dusche et al., 2022). Indeed, the association between school bullying and hate speech perpetration is small or moderate (Wachs et al., 2019; Blaya et al., 2020). Second, adolescence is a critical period for developing social identity, a part of self-concept that originates from the knowledge of beginning one or many social groups and the emotional value attributed to that membership (Tajfel, 1982). It is related to in-group membership and derives from interacting with out-groups and establishing comparisons with them (Wettstein, 2021). This comparison reinforces differentiation and identification with the in-group. It provides a sense of belongingness that results in a confident self-concept that might promote, in some cases, discrimination against the outgroups (Tajfel, 1982).

Taking this into account, recent studies have advanced in examining hate speech in online settings (Räsänen et al., 2016; Blaya et al., 2020; Wachs et al., 2021a; Kansok-Dusche et al., 2022). However, the face-to-face context has not received equal attention, except for a few studies with US samples (Van Dorn, 2004; Elpus and Carter, 2016; Lehman, 2019, 2020). Nonetheless, a complete understanding of hate speech should include additional socialization contexts, such as the school. Adolescents spend most of their time at school, and teachers play a crucial role in preventing and mitigating hurtful behavior (Ertesvåg and Roland, 2015). Thus, the simultaneous characterization of this phenomenon in offline and online settings is crucial to designing educational strategies to prevent and manage hate speech. Indeed, victimization and perpetration of related phenomena, such as bullying, tend to overlap between offline and online contexts (Estévez et al., 2020). Understanding the similarities and differences would offer a better characterization of the prevalence of hate speech. Nonetheless, the existing studies have examined both settings separately. Next, the main findings of these studies are described.

1.2. Prevalence of hate speech

Researchers have studied online hate speech in adolescents and young adults (e.g., Blaya et al., 2020; Reichelmann et al., 2021; Kansok-Dusche et al., 2022; Wachs et al., 2022b), showing that it is a prevalent problem. A systematic review concluded that the percentage of adolescents who have witnessed online hate speech varies between 26 and 39.2% (Kansok-Dusche et al., 2022). Moreover, Reichelmann et al. (2021) found that 70.7% of the 18–25-year-old respondents witnessed online hate speech in the preceding 3 months. In another study, Harriman et al. (2020) found that 57% of 14–20-year-old participants reported that they had observed hate messages on social media or a website in the preceding 2 months. Regarding the European context, some studies have observed different prevalence rates of hate speech among youth and adolescents. Blaya et al. (2020) found that among French students aged 12–20, one out of 10 respondents reported online hate speech victimization, while 5% acknowledged perpetration during the preceding year. Keipi et al. (2018) found that 48% of Finnish 15–30-year-olds reported to have been exposed to online hate speech in the previous 3 months. In summary, the prevalence rates of online

hate speech seem to vary considerably, which can be explained by different measurement instruments.

Few studies have investigated offline hate speech in schools. In a survey conducted with a representative sample of adolescents in the United States, 39.2% observed hate-related graffiti and symbols at school in 1999, with the frequency decreasing to 26% by 2013 (Van Dorn, 2004; Lehman, 2019, 2020). A study focused on students who belong to school music clubs found that around 10% were victimized by different forms of hate speech (Elpus and Carter, 2016). Finally, the United States Government Accountability Office (2021) reported that around 25% of adolescents had seen hate symbols at their school, and 7% had been victims of hate speech in their school. In contrast to the American context, we still know little about the spread of offline hate speech among adolescents in other social contexts, such as the European. Additionally, the existing studies have analyzed online and offline hate speech separately. Our study aims to contribute to filling this gap in the literature.

1.3. Demographic differences in the prevalence of hate speech

1.3.1. Differences by gender

According to previous studies about online hate speech, girls report higher levels of victimization and lower levels of perpetration than boys (Kaakinen et al., 2018; Blaya and Audrin, 2019; Machackova et al., 2020; Wachs et al., 2022a). In line with these findings, adolescent boys show negative attitudes toward homosexuals (Chaux and León, 2016) and immigrants (Losito et al., 2018; Eckstein et al., 2021) to a greater extent than adolescent girls. Additionally, girls report witnessing online hate speech more often than boys (Wachs et al., 2022a), although the effect size is small. Few studies exist about gender differences in offline hate speech. While some documented no differences in victimization (Elpus and Carter, 2016; United States Government Accountability Office, 2021), others did not explore if witnessing hate speech at school varied as a function of gender (Van Dorn, 2004; Lehman, 2020). In sum, the effect sizes in online settings vary considerably, whereas for offline hate speech, the findings are inconclusive. Accordingly, we examined the extent to which the prevalence of hate speech varied by gender.

1.3.2. Differences by country

Following a socio-ecological approach (Bronfenbrenner, 1996), we also considered the context of the two educational systems of the countries included in the study. Germany and Switzerland are neighboring countries and share language and many cultural characteristics. Nevertheless, there are significant differences concerning regionalism and urbanization, the proportion of people with a migration background, the education systems' features, and the legislation regarding hate speech. Both countries have a federalist system. Nonetheless, in practice, Germany's federalist system is unitarist rather than decentralized and sees itself as a single entity.

In contrast, Switzerland's federalism is decentralized. The individual regions see themselves more as a diverse community of destiny than a nation. Switzerland tends to be more value-conservative, less urbanized, and more regional than Germany (Braun, 2003). At the same time, Switzerland has a higher proportion of people with a migration background (Federal Statistical Office Switzerland;

Statistisches Bundesamt, 2022) and a more selective education system than Germany.

Although previous research has demonstrated unique features of online hate speech across European countries (Machackova et al., 2020; Reichelmann et al., 2021), research about contextual differences for hate speech prevalence in offline settings is scarce. To the best of our knowledge, the Swiss and German contexts have been rarely compared in regards to face-to-face hate speech, thus, we address this research gap and describe offline and online hate speech in these two countries from student's perspective.

1.3.3. Differences by migration background

Children and adolescents with a migration background (i.e., they or their parents were born in a country other than the one they reside in) are more likely to report witnessing and be victims of online hate speech and bullying based on skin color than adolescents without a migration background (Walsh et al., 2016; Caravita et al., 2020; Wachs et al., 2022a). The evidence is mixed with regard to perpetration. While some studies suggest that adolescents with a migration background express more positive attitudes toward immigrants than their peers without a migration background (Losito et al., 2018), others found that they have stronger prejudices toward marginalized social groups such as homosexuals (Baier and Kamenowski, 2020). On the other hand, studies about online hate speech perpetration found no differences between students with and without a migration background (Wachs and Wright, 2018; Wachs et al., 2022a). Based on these findings, in the present study, we compared if the prevalence of hate speech varied due to the migration background of victims, perpetrators, and witnesses.

1.4. Characteristics of hate speech

Most of the studies about hate speech do not report its specific characteristics, such as perpetrators (e.g., classmates, teachers, and peers from outside the school), specific forms (e.g., insults and graffiti), and school locations. Instead, a typical practice is using a definition that includes multiple characteristics. Information about the perpetrators is scarce, probably due to the anonymity of online settings and the lack of studies with specific items. In regard to specific forms, Van Dorn (2004) found that although adolescents from a representative sample of United States witnessed hate symbols more often than hate-related words, the last significantly predicted victimization. An exception in regard to locations is a study by Lehman (2020), who found that offline hate speech victimization was associated with avoiding the school entrance and the cafeteria. To the best of our knowledge, no other studies describe school locations where hate speech occurs. However, school socialization contexts have different dynamics. For instance, bullying occurs more often in playgrounds than in classrooms (Craig et al., 2000). To contribute to the literature, in the present study, we describe perpetrators, forms, and school locations of offline and online hate speech.

1.5. The present study

The existing literature on hate speech during adolescence is concentrated mainly on online settings. Consequently, important

questions about the prevalence of school offline hate speech and its correlation, similarities, and differences with online hate speech still need to be answered. The present study aimed to contribute to the literature by describing the prevalence of offline and online hate speech in two European countries (Germany and Switzerland). Building on previous evidence, we compared the perception of students by gender, country, and whether they had a migration background or not. Moreover, we describe who perpetrated hate speech, the forms it takes, and the school locations where it occurs most often.

2. Methods

2.1. Sampling procedure and participants

In Switzerland, the acquisition pool of sample schools in six German-speakers cantons was composed *via* a contrastive sampling scheme that combined two criteria: migration background (high/low) and geography (rural/urban). In Germany, the acquisition pool of sample schools in the federal states of Berlin and Brandenburg was composed through a stratified and randomized probability-proportional-to-size scheme (Yates and Grundy, 1953). School principals were informed that their schools had been randomly selected to participate in this research project. Principals of 22 schools in Switzerland and 20 schools in Germany agreed to participate in the study (participation rate at the school level: 40%). All students ($N=5,928$) from 290 available classes from the seventh, eighth, ninth, and mixed grades were invited to participate in the study.

Based on the written consent of their parents or other legal guardians, a total of 3,620 adolescents from Germany ($n=1,901$; 52.5%) and Switzerland ($n=1,719$; 47.5%) from grades 7–9 (seventh grade: 30%, $n=1,086$; eighth grade: 32.3%, $n=1,170$; ninth grade: 28.4%, $n=1,029$). The response rates were at the individual level 61% and at the class level 84%. In addition, 335 Swiss participants (9.3%) were in mixed grades, in which students between 14 and 16 years old are taught together. Typically, students' age range between 13 and 15 in these grades. In terms of gender, 46.9% ($n=1,698$) self-identified as boys, 51% ($n=1,848$) as girls, 1.9% ($n=67$) as gender diverse, and 0.2% ($n=7$) did not provide an answer. In 2021, 27% of the population in Germany (Statistisches Bundesamt, 2022) and 39% of the population in Switzerland (Federal Statistical Office Switzerland, 2022) had a migration background (i.e., either themselves or at least one parent born outside of, respectively, Switzerland or Germany; as defined by Statistisches Bundesamt, 2022). In both countries, adolescents have a higher migration rate than the general population. Our sample reflected these population distributions for this age group. A total of 41.4% ($n=1,499$) of the study participants reported that they had a migration background, and 58.6% ($n=2,121$) did not report a migration background. Specifically, 35.4% of participants in Germany and 48.3% in Switzerland reported having a migration background. Finally, both the German and the Swiss samples are representative of the adolescents in this age group in each population in terms of geography (rural/urban).

2.2. Measures

The instrument used for measuring hate speech was newly developed for the present study, based on previously conducted

qualitative research with adolescents (Ballaschk et al., 2021; Krause et al., 2021). Students were presented with a video with the definition of hate speech, which emphasized that hate is directed against social groups, is purposely hurtful, takes place in public, and besides, speech can take other non-verbal forms (see Appendix for complete definition).

2.2.1. Frequency of offline hate speech

After the video, students read a brief text stating that we were interested in their experiences with hate speech that happens in school without using digital media. Then students were asked to report how often did they witness, were victimized, and did perpetrate offline hate speech in their schools in the last 12 months by using a five-point scale ("not at all," "1 or 2 times within the last 12 months," "2 or 3 times per month," "about once a week," "several times a week."). These questions were not mutually exclusive, as all the participants were presented with the three questions.

The survey was designed with filters so that questions about specific features were presented accordingly to participants' answers to the initial questions (see Appendix A). Specifically, students who reported witnessing, victimization, and perpetration at least once were presented with questions about (1) the group victimized and its frequency (e.g., people with a particular skin color or origin) by using a four-point scale ("never," "rarely," "sometimes," and "often"); (2) who did perpetrate hate speech (e.g., classmates), by answering yes or no to several perpetrators; (3) the forms of hate speech and its frequency (e.g., offensive jokes), by using a four-point scale ("never," "rarely," "sometimes," and "often"); and (4) the place in which hate speech occurred (e.g., classroom), by answering yes or no to several places at the school (see Appendix A).

2.2.2. Frequency of online hate speech

Students read a brief text that stated that we were interested in their experiences with hate speech on the Internet (i.e., online hate speech). After students were asked about how often did they witness, were victimized, and did perpetrate online hate speech in the last 12 months by using the same five-point scale used for assessing offline hate speech. The survey was designed with filters so that questions about the features of online hate speech were presented accordingly to participants' answers to the initial questions. Specifically, students who reported witnessing/victimization/perpetration of online hate speech at least once were presented with the same questions and response options about the group victimized and who perpetrated hate speech (see Appendix A).

2.3. Data collection

Data were collected between December 2020 and June 2021. Students who had their parent's or legal guardians' written consent participated in the survey during a school lesson. They were informed in advance that participation in the survey was voluntary, that their data would be anonymized, and that they could terminate participation at any time. Students received an access code *via* e-mail and subsequently completed the digital survey.

2.4. Data analysis

The percentage of responses to each survey question is reported to examine the prevalence of hate speech. To examine differences by

gender, country, and migration background of the respondent, chi-squared tests were conducted. For the scales with more than two response options, the categories were added to compare the options that represented the absence of frequency (i.e., *never* and *not at all*) against the categories that indicated frequency (i.e., “1 or 2 times,” “2 or 3 times a month,” “about once a week,” and “several times a week”). To estimate the magnitude of the observed differences, we computed the Cohen’s *d* effect size to compare contingency tables of categorical variables with two levels. Values below 0.20 are considered small, values between 0.20 and 0.60 are considered moderate, and values larger than 0.60 are considered large (Cohen, 1988). Finally, bivariate correlations were computed for the overlap between witnesses, victims, and perpetrators in offline and online hate speech. In addition to the main analyses, a set of hierarchical logistic regressions were conducted to examine country differences after controlling for individual (gender and migration background) and classroom characteristics (grade).

3. Results

3.1. How prevalent is hate speech?

Table 1 shows the distribution of responses of the frequency of offline hate speech from witnesses, victims, and perpetrators’ perspectives. As observed 67% of the participants reported witnessing hate speech in their schools at least once, 33% said they had been the victims themselves, and 21% said they had been perpetrators (see Table 1). For online hate speech, the prevalence was similar for witnesses (64.6%) and lower for victims (19.9%) and perpetrators (12.6%), in comparison to offline hate speech (see Table 2). Moreover, offline and online hate speech were correlated. The strongest correlation was found for offline and online perpetration ($r=0.51$, $p<0.001$), followed by the correlation between offline and online victimization ($r=0.38$, $p<0.001$), and the correlation between offline and online witnessing ($r=0.32$, $p<0.001$).

The comparisons by gender, country, and migration background, as well as the significance tests, are presented in Table 1 for offline and Table 2 for online hate speech. Girls reported witnessing offline hate speech more often than boys (71.1 and 62.3% respectively, $p<0.001$, $d=0.18$), as well as more victimization experiences in school (35.1 and 28.9% respectively, $p<0.001$, $d=0.13$). In contrast, boys reported to have perpetrated offline hate speech more often than girls (25.6 and 17.6% respectively, $p<0.001$, $d=0.19$). Although statistically significant, these differences were small in magnitude. For online hate speech, the distribution of responses followed a similar pattern, with girls reporting higher frequencies of witnessing than boys (70.4 and 57.8%, respectively, $p<0.001$, $d=0.27$), more victimization (20.6 and 17.7% respectively, $p=0.034$, $d=0.07$), and less perpetration (9.1 and 16.4% respectively, $p<0.001$, $d=0.22$). The analyses showed that the gender differences for witnessing and perpetration were larger for online than for offline hate speech (see Table 2).

The prevalence of witnesses, victims, and perpetrators of offline hate speech in Switzerland was higher than in Germany. Specifically, 57.7% of students in Germany reported witnessing hate speech in their schools at least once. In comparison, in Switzerland, this percentage was 19.4 percentage points higher (77.1%, $p<0.001$, $d=0.42$). Consistently, more students in

Switzerland reported being victims and perpetrators of offline hate speech. While in Germany, 27% of participants reported being a victim at least once, in Switzerland, this percentage was 38.6% ($p<0.001$, $d=0.25$). Moreover, 18.7% of students in Germany and 24.1% of students in Switzerland reported being offline perpetrators ($p<0.001$, $d=0.13$). Most of these contextual differences were moderate in magnitude (see Table 1). Similarly to offline hate speech, students in Switzerland reported having observed online hate speech more often (68.12%) than in Germany (61.41%). Still, this difference was small in magnitude ($d=0.14$). Finally, the country differences observed in the roles of victims and perpetrators of offline hate speech were not observed in the online context (see Table 2).

Students with a migration background reported witnessing offline and online hate speech more often than those with no migration background. Specifically, 69.2% of students with a migration background witnessed offline hate speech. In comparison, this percentage was 65.5% in the group of students without a migration background ($p=0.019$, $d=0.08$). Similar proportions were observed for online hate speech (68.7% with a migration background and 61.6% without a migration background; $p<0.001$, $d=0.15$). Furthermore, the proportion of victims with a migration background for offline (36.6%) and online (23.5%) settings, was larger than the proportion of victims without a migration background (29.9% for offline and 17.3% for online).

Although statistically significant (offline $p<0.001$, $d=0.14$; online $p<0.001$, $d=0.15$), these differences were small in magnitude in both contexts. Finally, the frequency of offline hate speech perpetration did not vary as a function of the migration background of students (see Table 1). In contrast, students with a migration background reported having perpetrated online hate speech more often than those without a migration background (14.2 and 11.5%, respectively, $p=0.021$, $d=0.08$).

3.2. Who are the perpetrators?

According to student witnesses ($n=2,414$), in most cases, offline hate speech came from classmates (88.5%), followed by unknown sources (e.g., graffiti 19.1%), teachers (12.2%), and other school staff (3.9%, see Table 3). In contrast, for online hate speech, witnesses reported that in most of the situations, the perpetrator is someone they do not know (76.9%), followed by unknown sources (such as memes, stickers, or images, 58.8%), peers of the same age who do not attend their school (51.3%), and classmates (29.6%; see Table 4).

Significant differences by gender were observed. Specifically, 92.2% of girls and 84.1% of boys cited classmates as perpetrators of offline hate speech ($p<0.001$, $d=0.25$). While this difference was moderate, for online hate speech, the difference was small. Specifically, girls identified classmates as online perpetrators more often than boys (31.6 and 27.2%, respectively, $p=0.024$, $d=0.09$). Additionally, girls identified peers of the same age who do not attend their school as online perpetrators more often than boys (55.1 and 45.1% respectively, $p<0.000$, $d=0.19$). Finally, girls also identified teachers as offline perpetrators more often than boys (13.9 and 9.9% respectively, $p<0.001$, $d=0.12$).

TABLE 1 Frequency of witnessed, experienced and perpetrated offline hate speech, by country, gender and migration status of reporters.

Reporter	Sample	Not at all	1 or 2 times	Two or three times a month	About once a week	Several times a week	χ^2, p, d
Witnesses (students)	All (N=3,599)	33	26.2	17.3	10.6	13	30.3, $p < 0.001$, 0.18
	Boys (n=1,686)	37.7	23.6	15.4	9.2	14.1	
	Girls (n=1,839)	28.9	29	19.1	11.6	11.3	
	Germany (n=1,880)	42.3	21.8	13.4	9.2	13.4	153.23, $p < 0.001$, 0.42
	Switzerland (n=1,719)	22.9	31	21.5	12	12.6	
	No migration background (n=2,110)	34.6	24.9	16.7	10.5	13.3	5.47, $p = 0.019$, 0.08
	Migration background (n=1,489)	30.8	27.9	18.1	10.7	12.5	
Victims (students)	All (N=3,549)	67.4	18.4	6.8	3.4	4	15.66, $p < 0.001$, 0.13
	Boys (n=1,660)	71.1	14.9	6.3	3.5	4.2	
	Girls (n=1,819)	64.9	21.1	7.3	3.3	3.5	
	Germany (n=1,880)	73	14.8	5.3	3.1	3.8	54.56, $p < 0.001$, 0.25
	Switzerland (n=1,719)	61.4	22.2	8.4	3.8	4.3	
	No migration background (n=2,100)	70.1	16.4	6.2	3.3	3.9	17.98, $p < 0.001$, 0.14
	Migration background (n=1,449)	63.4	21.2	7.7	3.6	4.2	
Perpetrators (students)	All (N=3,539)	78.6	12.8	3.7	2.1	2.8	31.98, $p < 0.001$, 0.19
	Boys (n=1,660)	74.5	14	4.6	2.9	4.1	
	Girls (n=1,807)	82.4	12.1	2.7	1.5	1.4	
	Germany (n=1,820)	81.3	10.2	3.2	2.2	3.1	15.38, $p < 0.001$, 0.13
	Switzerland (n=1,719)	75.9	15.5	4.1	2	2.4	
	No migration background (n=2,102)	79.3	12.3	3.9	2.3	2.3	1.13, $p = 0.287$, 0.04
	Migration background (n=1,451)	77.8	13.6	3.4	1.9	3.4	

Percentages are displayed. For the Chi-squared tests, the response options were added to compare the responses that represented the absence of frequency (i.e., not at all) against the categories that indicated frequency (i.e., one or two times, two or three times a month, about once a week, several times a week). All the Chi-Squared tests have $df = 1$.

In Switzerland, classmates (90.6%) and other school staff (5.1%) were mentioned as hate speech perpetrators more often than in Germany (86 and 2.4%, respectively). These differences were statistically significant but small in magnitude (classmates: $p < 0.001$, $d = 0.14$; school staff: $p = 0.001$, $d = 0.14$). For online hate speech, students from Switzerland identified classmates (32.4%), peers of the same age who do not attend their school (54.3%) and unknown sources (62.9%) as perpetrators more often than students in Germany (26.8, 48.1, and 54.7% respectively). Although statistically significant, these differences were small in magnitude (see Table 4). No differences were observed

between the countries in other perpetrators, such as teachers for offline hate speech or unknown sources for online and offline hate speech.

Students with a migration background mentioned classmates as perpetrators more often than students without a migration background in offline (58.6 and 41.4%, respectively, $p < 0.001$, $d = 0.15$) and online hate speech (54.3 and 48.9%, respectively, $p = 0.010$, $d = 0.10$). In contrast, students without a migration background identified another school personal as offline hate speech perpetrators more often than students with a migration background (61.3 and 38.7% respectively, $p < 0.001$, $d = 0.15$). All these differences were small in magnitude (see Tables 3, 4).

TABLE 2 Frequency of witnessed, experienced and perpetrated online hate speech, by country, gender, and migration status of reporters.

Reporter	Sample	Not at all	One or two times	Two or three times a month	About once a week	Several times a week	χ^2, p, d
Witnesses (students)	All (N = 3,590)	35.4	20.3	16.4	10.0	17.9	62.76, $p < 0.001$, 0.27
	Boys (n = 1,683)	42.3	18.5	14.3	9.4	15.6	
	Girls (n = 1,834)	29.5	22.1	18.3	10.5	19.5	
	Germany (N = 1871)	38.6	17.5	14.9	8.6	20.4	17.64, $p < 0.001$, 0.14
	Switzerland (N = 1,719)	31.9	23.4	18.0	11.5	15.2	
	No migration background (n = 2,105)	38.3	21.3	15.7	9.3	15.3	18.90, $p < 0.001$, 0.15
	Migration background (n = 1,485)	31.3	18.9	17.2	11.0	21.6	
Victims (students)	All (N = 3,543)	80.2	11.8	4.5	1.8	1.8	4.49, $p = 0.034$, 0.07
	Boys (n = 1,656)	82.3	10.4	3.7	1.6	2.0	
	Girls (n = 1,817)	79.5	12.7	4.8	1.8	1.3	
	Germany (N = 1,824)	80.4	11.1	4.2	2.1	2.1	0.17, $p = 0.172$, 0.01
	Switzerland (N = 1,719)	79.9	12.5	4.7	1.3	1.6	
	No migration background (n = 2,096)	82.7	10.4	3.7	1.7	1.5	20.54, $p < 0.001$, 0.15
	Migration background (n = 1,447)	76.5	13.9	5.5	1.8	2.3	
Perpetrators (students)	All (N = 3,532)	87.4	6.9	2.8	1.5	1.4	41.98, $p < 0.001$, 0.22
	Boys (n = 1,654)	83.6	8.2	3.7	2.4	2.1	
	Girls (n = 1,807)	90.9	5.8	2.0	0.7	0.6	
	Germany (N = 1,813)	87.3	6.5	2.8	1.9	1.6	0.07, $p = 0.794$, <0.01
	Switzerland (N = 1,719)	87.6	7.5	2.7	1.1	1.2	
	No migration background (n = 2,090)	88.5	5.9	2.7	1.7	1.2	5.30, $p = 0.021$, 0.08
	Migration background (n = 1,442)	85.9	8.4	2.8	1.3	1.7	

Percentages are displayed. For the Chi-squared tests, the response options were added to compare the responses that represented the absence of frequency (i.e., not at all) against the categories that indicated frequency (i.e., one or two times, two or three times a month, about once a week, and several times a week). All the Chi-Squared tests have $df = 1$.

3.3. Who has hate speech been directed against?

Students who witnessed hate speech referred to skin color and origin as the most common characteristic of the targeted group of persons offline (49.6%) and online (63.3%). This report coincided with the perception of victims (24.2% of offline and 22.8% of online victims). In contrast, perpetrators reported skin color or origin (24.2% of offline

and 29.7% of online perpetrators) and sexual orientation (25.1% of offline and 34.7% of online perpetrators) to a similar extent. Regarding gender or gender identity and sexual orientation, victims reported having been targeted for these reasons to a similar extent. Specifically, gender or gender identity was reported by 12.4% of offline and 17.3% of online victims, and sexual orientation by 10.7% of offline and 17.8% of online victims. Religious beliefs were reported less frequently than other group references for hate speech (quoted by 23.3% of offline and 18.9%

TABLE 3 Perpetrators of offline hate speech, by country, gender, and migration status of the witnesses.

Reporter	Perpetrator			
	Classmate	Teacher	Other school staff	Unknown (i.e., graffiti)
Witnesses (students) (n = 2,414)	88.5	12.2	3.9	19.1
Boys (n = 1,052)	84.1	9.9	4.6	20.5
Girls (n = 1,309)	92.2	13.9	3.4	17.9
χ^2, p, d	37.74, $p < 0.001$, 0.25	9.16, $p = 0.002$, 0.12	2.24, $p = 0.134$, 0.06	2.67, $p = 0.102$, 0.07
Germany (n = 1,085)	86.0	13.6	2.4	20.5
Switzerland (n = 1,326)	90.6	11.1	5.05	18.0
χ^2, p, d	12.32, $p < 0.001$, 0.14	3.63, $p = 0.057$, 0.08	11.36, $p = 0.001$, 0.14	2.29, $p = 0.013$, 0.06
No migration background (n = 1,525)	41.4	51.2	61.3	46.2
Migration background (n = 1,030)	58.6	48.8	38.7	53.8
χ^2, p, d	12.76, $p < 0.001$, 0.15	9.85, $p = 0.057$, 0.13	13.63, $p < 0.001$, 0.15	2.82, $p = 0.093$, 0.07

Percentages within each subsample do not add up to 100, as participants were allowed to select more than one perpetrator. Chi-squared tests to compare by gender, country, and migration background are displayed below each group comparison. All the tests have $df = 1$.

of online witnesses, 9.7% of offline and 11.8% of online victims, and 11.6% of offline and 18.9 of online perpetrators). [Supplementary Tables 1, 2](#) display the complete statistics and group comparisons.

Among offline victimized students ($n_{girls} = 639, n_{boys} = 479$), victimization based on gender or gender identity was reported more often by girls (16.8%) than boys (5%). Similarly, among online victims ($n_{girls} = 373, n_{boys} = 293$), gender and gender identity was reported more often by girls (21.5%) than boys (6.1%). These differences were statistically significant and moderate in magnitude in both offline ($p < 0.001, d = 0.38$) and online settings ($p < 0.001, d = 0.44$).

Coinciding with victims, in the subsamples of offline witnesses ($n_{girls} = 1,307, n_{boys} = 1,051$), girls reported gender and gender identity as a group reference for hate speech more often than boys (34.7 and 28.1%, respectively, $p = 0.001, d = 0.14$). The result was observed among the online witnesses ($n_{girls} = 1,293, n_{boys} = 1,971$), with girls reporting gender and gender identity more often than boys (59.4 and 45.7% respectively, $p < 0.001, d = 0.27$). A moderate gender difference was observed for online victims ($n_{girls} = 373, n_{boys} = 293$), as girls reported to had been targeted for their sexual orientation more often than boys (25.1 and 8.5% respectively; $p < 0.001, d = 0.31$). While the group targeted by

online hate speech did not differ by gender according to perpetrators, a moderate difference was observed for offline hate speech. Specifically, among students who admitted having perpetrated offline hate speech ($n_{girls} = 319, n_{boys} = 424$), boys (29.2%) reported sexual orientation as the group reference for hate speech more often than girls (19.7%). Other small gender differences can be seen in [Supplementary Tables 1, 2](#).

The comparisons by country revealed that the main differences between Switzerland and Germany regarded skin color or origin as the group reference for hate speech. *Students from Switzerland* reported skin color or origin as a group reference for offline hate speech more often than students from Germany, according to witnesses (56.2 and 41.5%, respectively; $p < 0.001, d = 0.30$), and victims (28.9 and 17.8% respectively; $p < 0.001, d = 0.26$). Similarly, skin color or origin was quoted as the targeted identity of online hate speech more often by victims from Switzerland (28.3%) than victims from Germany (14.8%; $p < 0.001, d = 0.33$). These country differences were moderate in magnitude. Finally, online perpetrators referred to skin color or origin more often in Switzerland (34.1%) than in Germany (22.5%), with a statistically significant and moderate in magnitude difference ($p < 0.001, d = 0.26$). The complete country comparisons can be found in [Supplementary Table 2](#).

While 45.2% of offline *victims with a migration background* reported being victimized for their skin color or origin, this percentage was only 6.4% in the sample of victims without a migration background ($p < 0.001, d = 1.01$). The same result was observed for online hate speech, with 38.5% of students with a migration background reported to have been victimized for their skin color or origin, versus 5.5% of students without a migration background reporting to have been victimized for this reason ($p < 0.001, d = 0.88$). Paradoxically, offline perpetrators with a migration background mentioned skin color or origin as the group they directed hate speech to more often than offline perpetrators without a migration background (28.4 and 21.2% respectively; $p = 0.022, d = 0.17$). This result was also observed for the report of online perpetrators (32.8% with a migration background and 24.1% without a migration background). This difference was larger in online hate speech. Furthermore, students with a migration background reported to had perpetrated offline hate speech against groups based on gender and gender identity (21.8%), religious beliefs (16.5%), and sexual orientation (32.4%) more often than students without a migration background (10.8, 8.1, and 19.8% respectively). These differences were statistically significant and moderate in magnitude (gender and gender identity: $p < 0.001, d = 0.30$, sexual orientation: $p < 0.001, d = 0.29$, religious beliefs: $p < 0.001, d = 0.26$; see [Supplementary Table 1](#)). The same pattern was observed for online hate speech. Specifically, perpetrators with a migration background reported to have perpetrated online hate speech against groups based on sexual orientation (42.2%) and religious beliefs (22.1%), more often than students without a migration background (24.9 and 14.1%, respectively). Both differences were statistically significant and moderate in magnitude (sexual orientation: $p < 0.001, d = 0.37$, religious beliefs: $p = 0.029, d = 0.21$; see [Supplementary Table 2](#)).

3.4. Which forms of hate speech were reported?

Of the 2,411 witnesses, 93.6% ($n = 2,256$) reported witnessing offensive jokes at their school in the past 12 months (see [Figure 1](#)). Furthermore, 83.6% reported witnessing the spread of rumors and lies

TABLE 4 Perpetrators of online hate speech by country, gender, and migration status of the witnesses.

Reporter	Perpetrator			
	Classmates	Peers of same age who are not from the school	Unknown person	Unknown source (e.g., memes)
Witnesses (students) ($n=2,320$)	29.6	51.3	76.9	58.8
Boys ($n=971$)	27.2	45.1	75.2	57.9
Girls (1,293)	31.6	55.1	78.0	59.7
χ^2, p, d	5.07, $p=0.024, 0.09$	22.00, $p<0.000, 0.19$	2.54, $p=0.111, 0.07$	0.77, $p=0.382, 0.04$
Germany ($n=1,149$)	26.8	48.1	75.5	54.7
Switzerland ($n=1,171$)	32.4	54.3	78.1	62.9
χ^2, p, d	8.6, $p=0.003, 0.12$	8.88, $p=0.003, 0.12$	2.19, $p=0.139, 0.06$	15.75, $p<0.000, 0.16$
No migration background ($n=1,299$)	27.9	48.9	75.8	57.7
Migration background ($n=1,021$)	31.7	54.3	78.3	60.2
χ^2, p, d	3.94, $p=0.047, 0.08$	6.62, $p=0.010, 0.10$	2.02, $p=0.155, 0.06$	1.47, $p=0.225, 0.05$

Percentages within each subsample do not add up to 100, as participants were allowed to select more than one perpetrator. Chi-squared tests to compare by gender, country, and migration background are displayed below each group comparison. All the tests have $df=1$.

about the people of a particular group, 80.3% the spread of prejudice, and 70.1% the spread of discriminatory symbols, stickers, pictures, memes, or videos. Six in every 10 students reported witnessing “the blaming of a group of people for their problems or the problems of a country” (60.1%). Other forms, such as threats and calls for violence, were witnessed less often by the students (38.2 and 40.6%, respectively). Given that hate speech might include multiple aggressive behaviors rather than a single subtype, the survey allowed students to select multiple answers when asked about the types of offline hate speech they witnessed. While only 3.9% of students reported witnessing only one form of hate speech, 93.7% reported witnessing two or more forms simultaneously.

Girls reported witnessing offensive jokes, spreading prejudices, spreading rumors or lies, threats, and blaming a group of people for their problems or the problems of a country more often than boys. These differences were statistically significant but small in magnitude (see [Supplementary Table 3](#)). The largest difference with respect to boys (6.8 percentage points) was observed for the spread of rumors or lies and prejudice (girls 83.1%, boys 76.3%; $p<0.001, d=0.16$). The forms of hate speech reported by witnesses did not vary as a function of country (see [Supplementary Table 3](#)).

Students with a migration background ($n=1,030$) reported witnessing blaming a group of people for their own or the problems of a country (65%), threats (43.3%), and calls for violence (45.5%) more often than their peers without a migration background (56.5, 34.3, and 38.9% respectively). These differences were statistically significant but small in magnitude (blaming: $p<0.001, d=0.17$, threats: $p<0.001, d=0.18$, calls for violence: $p<0.001, d=0.18$; see [Supplementary Table 3](#)).

3.5. In which places does hate speech occur?

As displayed in [Figure 1](#), according to the report of witnesses, offline hate speech occurs mainly in the break time areas (84.8%)

and the classroom (71.2%). In a smaller proportion, it takes place in the toilets, gyms, hallways, and showers (53.7%), outside or on their way to school (50%), and in the cafeteria (21.2%). Girls reported witnessing hate speech in the classroom (75.1%) significantly more often than boys (66.1%; $p<0.001, d=0.20$). In contrast, “on the way to school” was quoted significantly more often by boys (54.1%) than girls (47.1%; $p=0.001, d=0.14$; see [Supplementary Table 4](#)).

Statistically significant differences of moderate magnitude were observed between the countries. In Germany ($n=1,085$), 54.7% of students reported witnessing hate speech that happened outside the school. In Switzerland ($n=1,326$), this percentage was 18.6 percentage points higher (73.2%; $p<0.001, d=0.40$; see [Supplementary Table 4](#)). While 58.3% of students in Switzerland reported witnessing hate speech in toilets, gyms, hallways, and showers at their school, this percentage was in 48.1% in Germany ($p<0.001, d=0.34$). Moreover, the proportion of students who reported that it took place in other places at the school was also significantly larger in Switzerland (38%) than in Germany (22.1%; $p<0.001, d=0.35$). In contrast, a moderate statistically significant difference was observed for the occurrence of hate speech in the cafeteria, being significantly more common in Germany (28.9%) than in Switzerland (15%; $p<0.001, d=0.34$, see [Supplementary Table 4](#)). The report of places where hate speech happened did not vary as a function of the migration background of the students.

3.6. Additional analyses for country differences

[Supplementary Tables 5, 6](#) present the results from the hierarchical logistic regressions conducted to examine country differences. In line with the findings from the Chi-square tests, the analyses revealed that after controlling for gender, migration background, and grade,

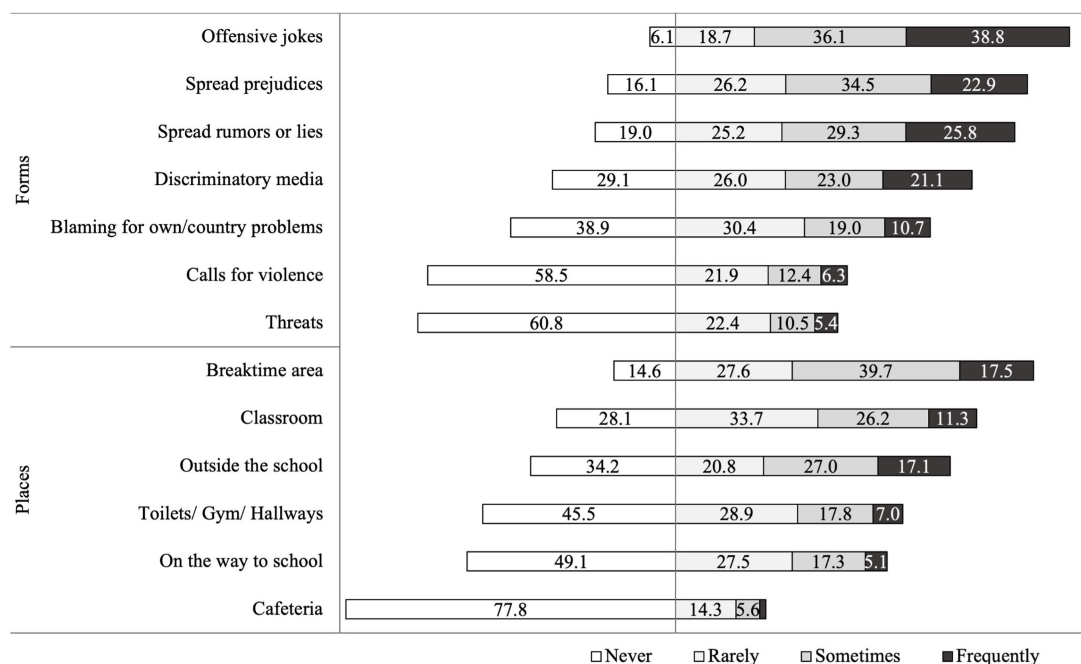


FIGURE 1 Types and places where offline hate speech occurs as reported by witnesses. The 1.4% of students who reported to have observed hate speech in the cafeteria “frequently” is not displayed for clarity.

students in Switzerland were more likely to report that they had witnessed online and offline hate speech, being victims of offline hate speech, and perpetrated offline hate speech.

4. Discussion

This binational study aimed to shed light on offline and online hate speech from the students’ perspective. We focused on the intrapersonal level of the theoretical model for studying hate speech in school contexts (Wachs et al., 2020). More specifically, we examined the extent to which offline and online hate speech prevalence varied as a function of three demographic variables, namely gender, country, and migration background. The results show that hate speech is relatively prevalent in both countries.

4.1. Frequencies of offline and online hate speech

In our sample, seven of every 10 students reported witnessing offline hate speech in their schools, and six of every 10 reported being exposed to online hate speech in the preceding 12 months. Moreover, 32% of the students self-identified as victims and 21% as perpetrators of offline hate speech, and 20% self-identified as online victims and 13% as perpetrators of offline hate speech. However, it is essential to clarify that only 4.9% of adolescents reported a weekly perpetration of hate speech at their school and 1.4% a weekly perpetration of online hate speech. These numbers coincide with the conclusions from a systematic review about online and offline hate speech prevalence,

which found that hate speech exposure occurs more frequently than victimization and perpetration (Kansok-Dusche et al., 2022). It also mirrors the typical distribution of participant roles from other aggressive behaviors that share some features with hate speech, such as bullying (Salmivalli et al., 1996), in which the majority of students assume the role of observers, and the victims are usually more than the perpetrators (Matos et al., 2018).

Prior research on offline hate speech exposure in schools among U.S. adolescents (aged 12–18 years) documented frequencies for hate speech exposure from 26 to 39.2% (Van Dorn, 2004; Lehman, 2019, 2020; United States Government Accountability Office, 2021) and from 7 to 11.9% for victimization (Van Dorn, 2004; Elpus and Carter, 2016; Lehman, 2019; United States Government Accountability Office, 2021) within a school year. In our study, more than two-thirds of participants had witnessed hate speech in their school. The differences between findings from these studies and ours must be interpreted cautiously, given the marked differences in the measurement protocols. Specifically, the higher prevalence observed in our sample, concerning the US context, might be explained by three main issues. First, the variety in the operationalization and definition of hate speech has been documented before (Papcunová et al., 2021). For instance, Lehman (2019, p. 178) used the question, “have you seen any hate-related words or symbols written in school classrooms, bathrooms, hallways, or outside of your school building?” In contrast, in the present study, the definition clearly stated the intention to hurt victims because of their belongingness to a social group. The second explanation concerns the response options. While we used a five-point frequency scale, previous studies typically used a yes/no format. Finally, the time frame stated in the questions is different. While ours is specific to the last 12 months, previous studies refer to “this school year” (Lehman, 2019, p. 178) or “the previous

6 months” (Van Dorn, 2004, p. 309). Comparative studies with similar measurement protocols are needed.

Our findings highlight that adolescents are frequently exposed to online hate speech. More specifically, we found 65% reported being exposed to online hate speech. This percentage overpassed the prevalences documented in previous studies (see Kansok-Dusche et al., 2022, for a review). This might be explained by the time in which data were collected. Specifically during the lockdowns due to the COVID-19 pandemic, the time that adolescents spent online could be higher than it was in previous years. Similarly to offline hate speech, the comparisons between this and previous studies must be made cautiously due to the different methodologies and sample characteristics.

4.2. Similarities and differences between offline and online hate speech

In line with related research fields such as bullying, the overlap between offline and online perpetration was moderate (Estévez et al., 2020). Besides highlighting the risk of hate speech being present in multiple contexts, these findings are promising regarding prevention. From related fields of research, such as cyberbullying, it has been observed that the positive effects of school interventions that target face-to-face interactions might also expand to online settings and vice versa (Chaux et al., 2016). Moreover, a salient similarity between offline and online settings was that skin color or origin was the most common targeted identity, as reported by witnesses. This finding coincides with previous studies on online (Reichelmann et al., 2021; Wachs et al., 2021a) and offline hate speech (United States Government Accountability Office, 2021).

Although our results suggest similarities rather than dissimilarities between online and offline settings, two main differences were observed. First, the gender gaps were more pronounced in the online context. Specifically, girls reported less perpetration and more victimization than boys to a greater extent in online contexts than in school. This might be due to the gender differences in terms of online behaviors, social skills, and aggression in general (see the discussion later in the gender differences section). Second, the prevalence of victims and perpetrators was higher for offline hate speech.

4.3. Differences by gender

In our study, girls reported significantly more victimization experiences, less perpetration, and a greater frequency of witnessing hate speech. This finding aligns with previous results for bias-based online aggression and online hate speech (Chaux and León, 2016; Losito et al., 2018; Eckstein et al., 2021; Kansok-Dusche et al., 2022; Wachs et al., 2022a) but contradicts previous findings for offline hate speech (Elpus and Carter, 2016; United States Government Accountability Office, 2021). Interestingly, these differences varied in magnitude as a function of the context, being larger for online hate speech. This might be explained by the well-documented gender differences in online aggression (Guo, 2016), and social skills (Van der Graaff et al., 2018). For instance, the positive association between the perpetration of cyberbullying and toxic online disinhibition (i.e.,

behaving in negative ways in online settings as a result of a perceived loosening of the typical social restrictions present in offline interactions; Suler, 2004) is stronger for boys (Wang et al., 2022). Moreover, the protective effect of emotional intelligence on cyber aggression perpetration is weaker for girls (Yudes et al., 2022).

Further, girls reported higher levels of victimization based on gender or gender identity than boys. Currently, there is no consensus about the gender differences in the positive association between gender identity and victimization. Some studies show that adolescent boys who do not conform to the hegemonic image of masculinity are more likely to experience cyberbullying (Jackson et al., 2020) and homophobic bullying (van Beusekom et al., 2020) than girls. Similarly, gender did not explain whether a sample of Italian adolescents were victimized only at school, online or in both settings (Gini et al., 2019). In contrast, other studies conclude that boys are less likely to experience victimization than girls and other gender minority groups (e.g., transgender; Smith et al., 2022). Further research is needed to understand the gender and gender-identity-based hate speech observed in our study.

4.4. Differences by country

Moderate and large differences were observed between Germany and Switzerland. In Switzerland, hate speech seems more widespread and relates more often to the skin color and origin of the targeted group than in Germany. This is in line with a report of the International Convention on the Elimination of Racial Discrimination (2021) on Switzerland’s handling of racial discrimination. The CERD is concerned about limited funding and human resources, varying from one Swiss canton to another, and criticizes the absence of a clear legal framework for combating racial discrimination. Further, racist hate speech may be due to Switzerland’s more conservative, small-scale regional attitudes (Braun, 2003), in which a foreign person is more likely to be perceived as a threat. These ideas require verification. For this, future studies must consider contextual and cultural aspects when studying the prevalence of hate speech across countries.

4.5. Differences by migration background

In line with previous evidence, adolescents with a migration background reported higher hate speech victimization based on skin color and origin than their classmates without a migration background (Caravita et al., 2020; Wachs et al., 2022a). This was the largest difference observed in our study. Findings from related lines of research demonstrate that immigration status is a risk factor for bullying (Caravita et al., 2019) and social exclusion (López Hernández, 2022). Given this finding, further investigation of hate speech with a focus on migration is highly important to provide insights for prevention and intervention to protect those who are more at risk of being victimized.

An unexpected result was that students with a migration background were also reported to be perpetrators of offline and online racist hate speech more often. This result can be related to the finding of skin color and origin being our sample’s most cited group reference for hate speech. It is plausible to think that being victimized themselves might lead students with a migration background to react aggressively against other groups. As their identity is

threatened, victimized students can use hate speech to strengthen their identity by devaluating other groups (Ballaschk et al., 2021; Wettstein, 2021; Wachs et al., 2022d). Further research about victim perpetrators with a focus on migration background needs to be conducted to test this proposition. Nevertheless, previous evidence supports this idea, as adolescents consider that hate speech perpetration can be motivated by a need to compensate for feelings of inferiority and revenge (Ballaschk et al., 2021; Wachs et al., 2022d).

4.6. Strengths and practical implications

This study contributes to the literature and the prevention of school offline hate speech with unique insights for intervention and prevention efforts. First, hate speech originates mainly from classmates and is directed against victims because of their skin color, origin, or sexual orientation. Second, hate speech often happens outside the classroom in places with little supervision, making teacher intervention much more difficult. Additionally, one in every 10 students identified school staff as perpetrators. These worrisome results must be taken into account in the design of school interventions for discriminatory behaviors. Prior evidence suggests that in addition to universal components directed to all the school community members, the most successful programs to prevent school violence also have targeted strategies aimed at specific groups, such as victims (Gaffney et al., 2021).

The particular features of the offline hate speech phenomenon in the two cultural contexts studied here point out the need to adapt strategies to the needs of each social ecology. For instance, witnessing hate speech outside the school was more common in Switzerland than in Germany. In contrast, the opposite was true for the cafeteria (being more common in Germany than in Switzerland). Qualitative studies might help to clarify and further understand these differences so that prevention and intervention efforts are oriented efficiently. Seemann-Herz et al. (2022) identified 14 school prevention and intervention programs in German that were focused on online (but not offline) hate speech. However, the present study's findings show that hate speech is a frequent problem in face-to-face contexts. As limited staff, resources, and time are typical difficulties in implementing extra-curricular school prevention programs (Moir, 2018), topics of discrimination, prejudice, and hate speech could be added to existing successful interventions. In this way, schools can optimize the available resources and account for the specific features of offline hate speech evidenced here. One alternative to this might be the theory-based and empirically evaluated prevention program "HateLess. Together against hatred" (Wachs et al., 2023). HateLess incorporates intergroup contact interventions (e.g., indirect contact *via* stories and movies about social outgroup members), knowledge-based interventions (e.g., providing information about minorities and democratic values and principles), and individual skill acquisition (e.g., empathy training).

4.7. Limitations and future studies

Despite the critical contributions of the present study, it is not exempt from limitations. Although we guaranteed anonymity and asked about different roles, self-reporting is always challenging for studies that involve socially desirable or sensitive topics such as perpetration and

victimization. Methodologies such as peer nominations can benefit the field of hate speech in this regard, as students might be less biased when reporting others' problematic behaviors rather than about their own (Bukowski et al., 2017). Also related to measurement, we used single items with particular questions. More complete scales are needed for a better understanding of offline hate speech.

In line with the theoretical model for the study of hate speech at schools, a complete understanding of this problem might include explanatory variables at other levels of adolescents' social development. Specifically, variables regarding adolescents' social interactions (e.g., relationships with peers and teachers), characteristics of the schools (e.g., school climate), and societal factors (e.g., policy and laws about discrimination) would allow for exploring more inferential research questions.

5. Conclusion

Overall, this binational study showed that offline and online hate speech is widespread and correlated among adolescents. The most common form of involvement is witnessing hate speech both offline and online. Small to moderate differences were observed. In Switzerland, hate speech based on skin color or origin is more common than in Germany. Girls are victimized more often, whereas boys perpetrate hate speech to a greater extent. This difference was more pronounced for online hate speech than offline hate speech. The most common form of hate speech in schools was offensive jokes, and hate speech occurs more often in break-time areas. School prevention programs and interventions can benefit from these findings by designing strategies aligned with the particularities observed in these two cultural contexts. We hope that this descriptive contribution enables other researchers to build an integral and nuanced picture of hate speech in schools.

Data availability statement

The datasets presented in this article are not readily available because of confidentiality. Requests to access the datasets should be directed to alexander.wettstein@phbern.ch.

Ethics statement

The studies involving human participants were reviewed and approved by University of Potsdam Ethics Committee (UP65/2018). Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

Author contributions

MC: conceptualization, methodology, formal analysis, and writing (original draft). AW: conceptualization, writing (initial draft), research, and funding acquisition for the project. SW: conceptualization, writing (review and edit), research, and funding acquisition for the project. JK-D, CB, and NK: writing (review and edit) and data collection. LB: research, writing (review and editing),

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/feduc.2023.1076249/full#supplementary-material>

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